

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.





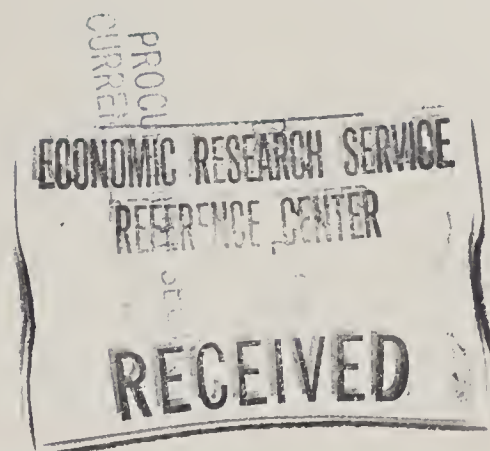
United States  
Department of  
Agriculture

Economic  
Research  
Service

RS-84-5  
May 1984

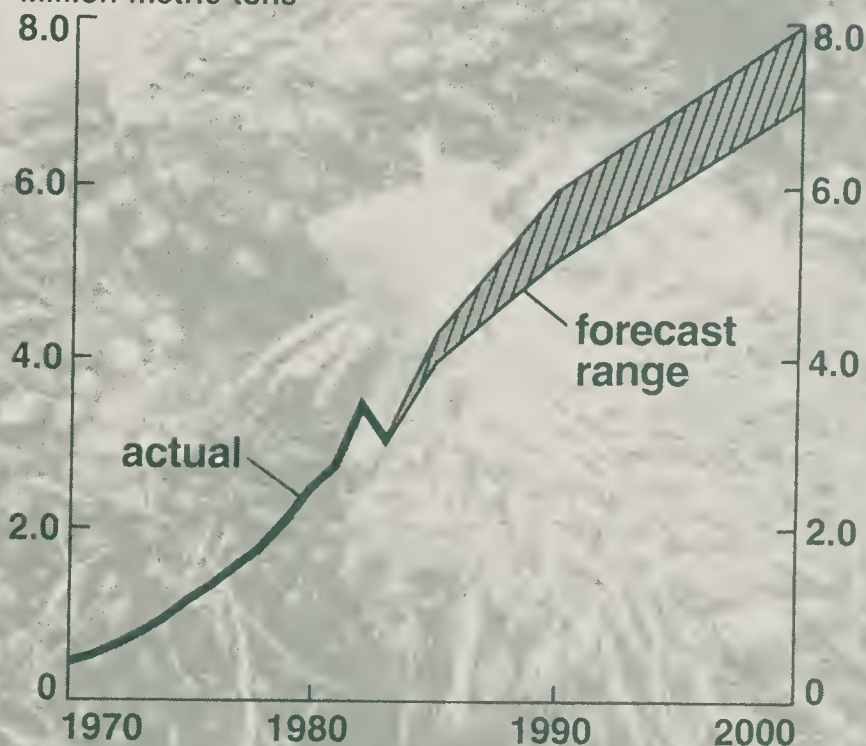
# Southeast Asia

## Outlook and Situation Report



### Palm Oil Production in Malaysia

Million metric tons



# Contents

<b>U.S. Farm Exports to Southeast Asia</b> .....	2
<b>Burma</b> .....	4
<b>Indonesia</b> .....	8
<b>Malaysia</b> .....	11
<b>Philippines</b> .....	13
<b>Singapore</b> .....	17
<b>Thailand</b> .....	17
<b>Centrally Planned Southeast Asia</b> .....	21

## Special Articles

Malaysia's Production and Exports of Palm Oil .....	21
Overview of Thailand Rice Sector .....	27

### Situation Coordinator

J. Albert Evans (202) 447-8229

### Electronic Word Processing

Patricia Abrams

### Principal Contributors

Gary P. Ender

J. Albert Evans

William Hall

Leslie Ross

Richard Nehring

### International Economics Division

Economic Research Service

U.S. Department of Agriculture

Washington, D.C. 20250

---

**NOTE:** Production is usually reported by calendar year; tons are metric; dollars are U.S., unless otherwise specified; and rice data are for milled rice unless otherwise specified. Subregions are defined as follows: Southeast Asia consists of Burma, Indonesia, Kampuchea, Laos, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. The Association of Southeast Asian Nations (ASEAN) consists of Indonesia, Malaysia, the Philippines, Singapore, and Thailand. East Asia consists of Hong Kong, Japan, South Korea, and Taiwan. South Asia consists of Afghanistan, Bangladesh, India, Nepal, Pakistan, and Sri Lanka.

Approved by the World Agricultural Outlook Board. Summary released May 1, 1984.

**Southeast Asia Outlook and Situation** is one in a series of 11 regional reports published annually by the Economic Research Service. Other titles in the series: USSR, China, South Asia, East Asia, North America and Oceania, Eastern Europe, Western Europe, Latin America, Middle East and North Africa, and Sub-Saharan Africa. Annual subscription: \$18 U.S., \$22.50 foreign. Single copies available for \$3.75 U.S., \$4.70 foreign. Order from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Make checks payable to the Superintendent of Documents.

Summaries of each report are available on several electronic information systems. For details, call (402) 475-1892; (310) 588-1572; or (340) 982-6500. Full reports, including tables, are provided by the system on (402) 472-1892.

Subscribers to the regional report series will receive renewal notices from the Government Printing Office approximately 90 days before their subscriptions expire. Notices will be sent **ONLY ONCE** and should be returned promptly to ensure uninterrupted service.

---



# Summary

**During fiscal 1984, U.S. agricultural exports** to Southeast Asia are likely to repeat 1983's performance of \$1.2 billion, which accounted for 3.3 percent of the U.S. total. This value has doubled since 1976. Higher commodity prices and recovery of drought-reduced crops, however, may lower shipments from a year ago. Growth is anticipated for U.S. poultry meat, soybean meal, and cotton exports because of rising real incomes, U.S. credit programs, and improving demand for the region's textile exports. Wheat, cotton, and soybeans continue to account for over 60 percent of U.S. farm exports to the region.

**Growth in 1984 agricultural output** for the region could rebound 4 to 6 percent from last year, paced by rice in Indonesia and palm oil in Malaysia. Continued increases in oil palm area and higher yields in the 1990's because of cloning will ensure that palm oil remains a strong competitor with other vegetable oils for the rest of this century. Production may reach 4.3 million tons in 1985, and 6.0 million by 1990; exports could correspondingly reach 3.5 million and 4.6 million tons.

**Except in the Philippines**, economies in Southeast Asia will continue to expand in 1984. Indonesia, which accounts for 46 percent of the region's gross domestic product, should see 3- to 5-percent growth as it maintains its slow recovery and keeps strict austerity measures in effect. Economic growth could reach 8 percent in Singapore, 7 percent in Malaysia, and stay around 6 percent in Thailand and Burma. The Philippines' economy, however, may not show any growth and could contract because of spiraling inflation.

**Last year, Southeast Asian economies** registered higher growth than in 1982, except in the Philippines and Indonesia. Growth reached 7 percent in export-oriented Singapore, but only 1 percent in the Philippines, where a seriously widening balance-of-payments deficit and currency speculation prompted a devaluation of the peso. The sluggish Indonesian growth came from lower oil export earnings and government austerity measures, which included rupiah devaluation. Strong domestic demand spurred healthy economic recovery in Thailand, Malaysia, and Singapore. Moderately rising inflation reached double-digit figures in the Philippines and Indonesia, but remained low elsewhere.

**Over the past decade, growth in Southeast Asia's agriculture** more than doubled South Asia's and more than tripled East Asia's. Regional agricultural output increased 2 percent in 1983, compared with no growth in 1982 and the 1980-82 average of 4.5 percent. Strong gains were made in Indonesia, Thailand, and Burma, while output was lower in the Philippines and Malaysia.

**Regional vegetable oil output fell** 8 percent in 1983, owing to a 14-percent drop in Malaysian palm oil production and drought-reduced Philippine coconut oil output. Regional coarse grain output rose 23 percent because of huge crops in Indonesia and Thailand. Domestically produced cotton accounts for about a fourth of regional consumption. Wheat production in the region remains insignificant.

**Rice is still the most important commodity** in every Southeast Asian country except Malaysia, where it ranks fourth. Rice accounts for 40 percent of the value of food production in Southeast Asia and 34 percent of all agricultural production. A successful rice harvest usually means a good agricultural year. For the 1983/84 crop, rice production increased to a record 61.6 million tons, 2 percent more than a year earlier and 5 percent above the 1980/81-1982/83 average. A bumper 6-percent-larger 1983 Thai crop more than offset stable production in Indonesia, Vietnam, and Burma and slightly smaller crops in Malaysia and the Philippines.

**Even in Thailand, where crops have been diversified**, rice remains the leader. Declining per capita consumption, along with strides in irrigation and dry-season output, has helped offset declining overall yields, and allowed rice exports to reach a record 3.7 million tons in 1983. Although there is much potential to expand production, uncertainties of weather, low farmgate prices, and government policies impede this potential.

## U.S. FARM EXPORTS TO SOUTHEAST ASIA

### U.S. Farm Products To Retain \$1.2-Billion Market

The value of U.S. agricultural exports to Southeast Asia during FY 83 was \$1.2 billion, including record shipments of soybeans, feed grains, and wheat (table 1). Higher demand for U.S. supplies stemmed primarily from the drought-affected Indonesian rice and Philippine corn crops and from tight export supplies of wheat and corn in several major competitor countries including Australia, Thailand, and South Africa. Higher commodity prices in FY 84 are expected to reduce volume and hold the value of U.S. exports to the region near \$1.2 billion. Significant export growth is likely for U.S. exports of poultry meat, soybean meal, and cotton, due mainly to increasing per capita incomes, U.S. credit programs, and improving demand for the region's textile exports. Declining demand for wheat, feed grains, rice, soybeans, and tobacco is expected because of high U.S. prices, tight foreign exchange availabilities in the Philippines, and improved regional crop production.

### Philippine Financial Crisis To Cut Region's Wheat Imports

U.S. wheat exports to Southeast Asia in FY 84 are expected to reverse trend and decline about 10 percent to 2.1 million tons, but higher prices may lessen the impact of this decline. The projected decline is primarily caused by the Philippines' foreign exchange shortage and subsequent disruption of trade. Presently, shipments to the Philippines are trailing last year's orders about 26 percent. Allocations of U.S. GSM-102 credit guarantees to the Philippines is enabling Philippine wheat imports to continue.

The other ASEAN wheat markets are projected to increase purchases of U.S. wheat a total of 5 percent from FY 83, but below the 9-percent growth between fiscal 1982 and 1983. Underlying this projection is the record 1982/83 Australian wheat crop, compared with last year's drought-reduced one, which is expected to lead to stronger competition. Malaysian wheat imports could increase slightly more than projected if the wheat/corn price ratio continues to promote substitution of feed wheat for corn. About 7 percent of Malaysia's imported wheat is used in feeding livestock, mainly hogs.

**Table 1.—U.S. agricultural exports to Southeast Asia by country and commodity groups, fiscal 1981-84<sup>1</sup>**

Country and year	Poultry meats		Inedible tallow		Nonfat dry milk		Other animal products and live animals	Wheat and products		Rice, milled		Feed grains	
	Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars		Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars
Burma													
1981	0	0	0	0	0	0	2	0	0	0	0	0	0
1982	0	0	0	0	5	2	137	0	0	0	0	0	0
1983	0	1	0	0	0	0	38	0	0	0	0	0	0
1984	0	1	0	0	0	0	38	0	0	0	0	0	0
Indonesia													
1981	69	142	0	0	3,240	1,487	4,317	714,427	128,564	103,685	50,861	190	34
1982	137	215	0	0	460	366	5,047	891,052	145,716	13,210	3,684	9,345	1,450
1983	114	183	88	31	6,586	6,248	4,977	975,950	146,895	67,081	20,215	15,746	2,082
1984	75	130	750	300	6,000	3,600	6,970	1,000,000	160,000	53,823	15,000	0	0
Malaysia													
1981	334	440	3	0	0	0	1,198	150,211	27,141	0	0	23	16
1982	537	762	0	12	0	0	1,584	129,193	21,006	0	0	123	75
1983	1,801	2,095	9	18	0	0	2,821	109,293	18,282	0	0	19,328	2,005
1984	2,000	2,500	10	20	0	0	3,480	125,000	20,000	0	0	0	0
Philippines													
1981	20	21	7,157	3,426	7,969	3,516	7,101	858,496	168,544	121	49	224,803	36,830
1982	19	41	6,979	2,978	5,599	2,507	9,352	892,816	155,504	109	45	160,062	20,130
1983	27	37	7,300	3,200	6,549	4,095	10,041	1,087,442	166,095	132	64	389,401	47,577
1984	40	54	3,000	1,500	6,400	3,840	3,591	800,000	131,265	75	30	150,000	24,000
Singapore													
1981	23,472	28,716	159	271	321	138	7,028	109,898	19,886	3,574	1,552	164,152	29,479
1982	31,958	36,243	135	225	3	2	9,746	19,940	3,889	1,444	611	203,281	26,401
1983	22,189	25,652	105	162	0	0	9,539	7,994	1,432	1,819	890	143,537	15,997
1984	25,000	31,250	125	206	0	0	8,544	22,000	3,960	1,000	475	200,000	28,000
Thailand													
1981	87	139	8	6	0	0	3,113	142,389	29,525	89	40	353	59
1982	19	41	0	0	0	0	3,737	73,632	13,036	40	19	0	0
1983	25	58	0	0	0	0	3,639	120,560	21,266	92	32	0	0
1984	25	60	0	0	0	60	4,880	131,000	22,100	20	9	0	60
Total													
1981	23,982	29,458	7,327	3,703	11,530	5,141	22,759	1,975,421	373,660	107,469	52,502	389,521	66,418
1982	32,670	37,302	7,114	3,215	6,067	2,877	29,603	2,006,633	339,151	14,803	4,359	372,811	48,056
1983	24,156	28,026	7,502	3,411	13,135	10,343	31,055	2,301,239	353,970	69,124	21,201	568,012	67,661
1984	27,140	33,995	3,885	2,026	12,400	7,500	27,503	2,078,000	337,325	54,918	15,514	350,000	52,060



## Recovery of Region's Corn Crop Reduces U.S. Exports

During FY 83, a record 568,000 tons of U.S. feed grains (mainly corn) was exported to Southeast Asia as drought lowered corn production in Thailand and the Philippines. Also the U.S. share of Southeast Asian corn imports rose from 13 percent to 31 percent between fiscal 1982 and 1983, due to reduced exportable surpluses in Thailand and South Africa. Except for the Philippines, the region's importers prefer Thai corn because it is bagged (thus accommodating both inadequate bulk handling facilities and internal transport facilities for feed grains), and because it can be purchased in smaller quantities with a shorter lead time. In general, Thai traders quickly adjust the price of their corn to the U.S. price. U.S. feed grain exports during FY 84 are estimated to fall over one-third to 350,000 tons as competition from Thailand intensifies, production increases in the Philippines, and as Indonesia, at least temporarily, becomes a net exporter.

## Diminishing U.S. Rice Exports Likely

Rice exports, primarily shipped to Indonesia under P.L. 480, Title I, are forecast to fall one-fifth below FY 83 to 55,000 tons. Southeast Asia imports the bulk of its rice from Thailand, because of low Thai prices. During 1983, Thai export prices (f.o.b.) for 100-percent white rice averaged 30 percent below similarly graded U.S. rice, which sold for \$428 a ton (f.o.b.). During FY 82, Thailand exported 176,000 tons to Singapore, 179,000 tons to Malaysia, and 340,000 tons to Indonesia, whereas the United States shipped 15,000 tons to the entire region. Southeast Asian importers buy primarily high-quality, 100-percent white rice, in addition to some imports of glutinous and broken rice (less than 10 percent of the total).

## Upturn in Poultry Meat Exports to Singapore

Driven by rising demand in Singapore, U.S. poultry exports to the region are projected to increase 12 percent

**Table 1.—U.S. agricultural exports by country and commodity groups, fiscal 1981-84—continued**

Country and year	Fruits, nuts and preparations	Vegetables and preparations	Soybeans		Oilcake and meal		Tobacco		Raw cotton		Other	-Total
	1,000 dollars	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	1,000 dollars	1,000 dollars
<b>Burma</b>												
1981	4	29	0	0	0	0	0	0	0	0	5	40
1982	0	27	0	0	0	0	0	0	0	0	27	214
1983	0	57	0	0	0	0	0	0	0	0	3	99
1984	0	57	0	0	0	0	0	0	0	0	3	99
<b>Indonesia</b>												
1981	9,119	1,940	251,771	74,760	96	9	1,471	14,018	46,338	88,943	7,965	382,159
1982	12,431	2,930	364,825	95,154	81,607	18,391	5,345	33,460	67,982	104,646	8,571	432,061
1983	7,371	4,398	445,416	106,797	20,343	4,964	1,584	8,232	59,160	93,286	4,512	410,191
1984	2,800	2,500	300,000	93,000	80,000	20,000	500	3,000	81,000	133,650	14,900	455,850
<b>Malaysia</b>												
1981	10,635	2,764	58,799	18,458	0	0	3,449	23,915	5,901	10,565	11,330	106,444
1982	12,961	2,982	139,494	36,140	0	0	3,917	31,243	11,529	16,150	11,575	134,117
1983	20,842	3,483	128,539	30,687	0	0	3,782	28,645	6,363	8,901	13,537	131,316
1984	23,000	3,000	125,000	39,375	0	0	3,500	26,250	10,000	16,000	13,975	147,600
<b>Philippines</b>												
1981	3,271	2,557	32,503	9,576	0	0	5,435	32,908	14,475	22,676	47,258	337,684
1982	2,843	7,264	31,285	8,056	69,676	14,631	5,536	39,751	13,278	18,211	37,109	320,141
1983	2,805	8,801	30,557	8,246	82,497	17,248	6,409	51,121	15,690	20,666	39,898	379,894
1984	1,440	5,000	0	0	150,000	35,250	2,000	11,900	18,000	23,000	27,300	268,170
<b>Singapore</b>												
1981	30,730	13,691	0	0	0	0	888	3,592	1,529	2,870	31,946	169,899
1982	31,703	12,972	0	0	11	3	1,027	4,662	3,974	5,779	30,429	162,665
1983	31,840	11,875	0	0	0	0	998	4,495	2,245	3,409	36,458	141,749
1984	35,500	12,000	0	0	0	0	600	3,900	3,500	5,950	46,815	176,600
<b>Thailand</b>												
1981	2,595	1,942	0	0	9,606	2,366	8,354	41,178	45,133	84,057	19,199	184,824
1982	3,547	995	0	0	3,853	883	12,559	67,431	36,026	50,555	14,882	155,126
1983	2,710	760	0	0	21,875	5,106	4,137	23,664	44,236	64,576	17,371	139,182
1984	3,160	860	0	0	25,000	5,720	6,000	33,000	50,000	75,000	16,757	161,666
<b>Total</b>												
1981	56,354	22,905	343,073	102,794	9,702	2,375	20,597	116,216	113,376	209,111	117,703	1,181,050
1982	63,485	27,170	535,604	139,350	155,147	33,908	28,384	176,547	132,789	195,341	104,312	1,204,676
1983	65,568	29,374	604,512	145,730	124,715	27,318	16,910	116,157	127,694	190,838	111,779	1,202,431
1984	65,900	23,417	425,000	132,375	255,000	60,970	12,600	78,050	162,500	253,600	119,750	1,209,985

<sup>1</sup>FY 84 is ERS forecast.

Sources: Bureau of the Census, U.S. Department of Commerce and ERS estimates.

from FY 83 to 27,000 tons, although still 17 percent below the FY 82 record. Although Singapore has commercial poultry operations, limited space and high demand will likely keep it a net importer of poultry through the 1980's. Import growth may be limited by the Government's efforts to consolidate many small farms into larger cooperatives to gain increased productivity in poultry (and swine) operations. The Government is reportedly considering a joint poultry production venture with Malaysia.

### High Prices Lower Soybean Demand

Soybean exports to Southeast Asia serve both the growing food needs of Indonesia's 156 million people, and the soybean crushing capacity in Malaysia, Singapore, and the Philippines. Competitively priced soybean meal from the People's Republic of China (PRC) reduced Malaysian demand for imported soybeans in FY 83, despite import duties designed to protect the Malaysian crushing industries. The recent 1983 licensing of soybean meal imports could lead to stronger import demand for soybeans relative to meal in Malaysia in FY 84. Higher prices and soybean meal competition are expected to force U.S. soybean exports to Southeast Asia down sharply toward 425,000 tons. Despite a 30-percent rise in prices, earnings will likely decline about 9 percent from FY 83's \$146 million.

The expected expansion of U.S. soybean meal exports in FY 84 mirrors policy changes in the Philippines and Indonesia. These changes are likely to drive U.S. exports

**Table 2.—Southeast Asia: Production, trade, and stocks of selected agricultural commodities, 1982-84**

Commodity	Production	Imports <sup>4</sup>	Exports <sup>4</sup>	Ending Stocks
1,000 tons				
Rice (milled) <sup>1</sup>				
1981/82	59,016	1,112	4,351	5,575
1982/83	60,488	1,802	4,655	4,352
1983/84 est.	61,553	1,443	4,905	3,704
Wheat				
1982	183	3,949	65	339
1983	200	4,044	84	299
1984 est.	210	4,160	60	268
Coarse grains				
1982	11,085	2,415	2,842	547
1983	13,597	3,041	2,670	328
1984 est.	14,374	2,800	4,340	333
Cotton <sup>2</sup>				
1982	416	1,358	72	307
1983	443	1,465	75	335
1984 est.	490	1,410	75	335
Vegetable oils				
1982	7,169	653	5,031	893
1983	6,622	517	5,137	370
1984 est.	7,442	524	5,180	450
Sugar <sup>3</sup>				
1982	7,385	1,254	3,772	1,849
1983	6,755	841	2,616	2,042
1984 est.	5,910	850	2,635	1,202

<sup>1</sup>Rice production data shown by crop year, with trade data presented by calendar year. For example, trade data presented for crop year 1983/84 are projections for calendar 1984. <sup>2</sup>Cotton data in thousand 480-pound bales. <sup>3</sup>Centrifugal white sugar. <sup>4</sup>Includes trade between countries in Southeast Asia.

**Table 3.—Southeast Asia: FY 83 currency, and exchange rates**

Country	Fiscal year	Currency and abbreviation	Midpoint rate of exchange for \$US1, June 1983
Burma	1 Apr. to 31 Mar.	Kyat (K)	8.038
Kampuchea	1 Jan. to 31 Dec.	Riel (KR)	NA
Indonesia	1 Apr. to 31 Mar.	Rupiah (Rp)	974.000
Laos	1 July to 30 June	New Kip (NK)	NA
Malaysia	1 Jan. to 31 Dec.	Ringgit (\$M)	2.332
Philippines	1 Jan. to 31 Dec.	Peso (P)	11.002
Singapore	1 Apr. to 31 Mar.	Singapore \$ (\$S)	2.132
Thailand	1 Oct. to 30 Sept.	Baht (B)	23.000
Vietnam	1 Jan. to 31 Dec.	Dong	NA

Source: International Financial Statistics, February 1984.

up 135-percent to 255,000 tons, far exceeding the FY 82 peak of 155,000 tons. Brazil usually supplies most of the meal imports, but the Philippines' foreign exchange shortage makes U.S. credit extremely attractive. Continued protection of the Thai soybean and products industry will confine the United States to the role of a residual supplier in Thailand. Inadequate domestic soybean production, combined with rising per capita livestock product demand, will keep Southeast Asia a net oilseed and oil cake importer through the decade.

### Increased Textile Industry Activity Lifts Demand for U.S. Cotton

Significantly higher domestic and foreign demand for the region's textile products is fostering greater raw cotton imports, supplied primarily by the United States. In FY 84 shortfalls in the Pakistani and Soviet cotton crops will offer greater opportunity for U.S. suppliers. For the Philippines, the U.S. extension of credit guarantees for cotton is another incentive. Credit availability will be important also in Thailand, as it seeks to replenish cotton stocks. The outlook is for U.S. cotton exports to record a 4-year high of 163,000 tons, up 27 percent from FY 83. [Leslie E. Ross, (202) 447-8230]

## BURMA

### Weak Exports Slow Economy

Difficult international market conditions for Burma's primary exports, coupled with sluggish industrial performance in 1983, held the country's real GNP growth to an officially estimated 5.6 percent, down slightly from 1982. Such growth, while higher than many surrounding Asian economies, occurred against a backdrop of deteriorating foreign exchange earnings and an inability to finance capital good imports necessary for development. From 1977 through 1981, Burma achieved an average annual GNP growth of more than 6 percent (in real terms), accompanied by rising exports and stable prices. Inflation increased to about 7 percent in 1983, compared with about 5 percent the previous year. Although still moderate, this rate is considerably higher than the below 2-percent average of the previous 5 years (1978-82).

Rice exports reached their highest volume in over a decade (table 8). However, earnings from the country's major source of foreign exchange only matched those for



**Table 4.—Southeast Asia: Total exports and imports, 1981-83**

Country	Exports			Imports			Trade balance		
	1981	1982	1983	1981	1982	1983	1981	1982	1983
<i>Billion dollars</i>									
Burma	0.5	0.4	0.4	0.7	0.8	0.7	-0.2	-0.4	-0.3
Indonesia	23.3	19.7	18.6	16.5	18.4	18.5	6.8	1.3	0.1
Malaysia	11.7	12.0	13.9	11.7	12.6	13.4	0	-0.6	0.5
Philippines	5.7	5.0	5.0	7.9	7.7	7.5	-2.2	-2.7	-2.5
Singapore	19.6	19.4	20.7	25.8	26.3	26.9	-6.2	-6.9	-6.2
Thailand	7.0	6.9	6.3	9.9	8.5	10.2	-2.9	-1.6	-3.9
Total	67.8	63.4	64.9	72.5	74.3	77.2	-4.7	-10.9	-12.3

Sources: International Financial Statistics, various country sources; ERS estimates.

**Table 5.—Southeast Asia: Agricultural exports and imports, 1981-83**

Country	Exports			Imports			Trade balance		
	1981	1982	1983	1981	1982	1983	1981	1982	1983
<i>Million dollars</i>									
Burma	495	330	317	775	850	604	-280	-520	-287
Indonesia	2,110	1,829	2,150	1,620	1,357	1,500	490	472	650
Malaysia	3,603	3,116	3,550	1,375	1,349	1,325	2,228	1,767	2,225
Philippines	1,890	1,574	1,600	664	792	712	1,226	782	888
Singapore	2,732	2,443	2,750	2,849	2,758	2,950	-117	-315	-200
Thailand	4,440	4,439	3,900	628	542	610	3,812	3,897	3,290
Total	15,270	13,731	14,267	7,911	7,648	7,701	7,359	6,083	6,566

Sources: Various country sources; ERS estimates.

**Table 6.—Southeast Asia: Selected macroeconomic indicators, 1983**

Country	GDP <sup>1</sup> (current)	Real GDP <sup>1</sup> growth	Midyear population	Population growth <sup>2</sup>	Inflation rate	International reserves <sup>3</sup>	Change in international reserves
	<i>Million dollars</i>	<i>Percent</i>	<i>Million</i>	<i>Percent</i>		<i>Million dollars</i>	
Burma	6,025	5.6	36.5	2.3	6.0	67	-38
Indonesia	103,400	2.3	156.0	2.1	12.1	3,718	+574
Kampuchea	NA	NA	6.1	2.4	NA	NA	NA
Laos	NA	NA	3.7	2.0	NA	NA	NA
Malaysia	31,206	5.6	14.7	2.3	4.0	4,300	+442
Philippines	34,500	1.4	52.1	2.6	11.0	786	-934
Singapore	14,600	7.2	2.5	1.2	1.1	9,200	+720
Thailand	39,152	6.2	49.6	2.0	5.5	1,606	-129
Vietnam	NA	NA	57.8	2.4	NA	NA	NA
Total	226,934	—	379.0	—	—	19,677	+635

NA = Not available.

<sup>1</sup>GNP for Burma, the Philippines, and Thailand. <sup>2</sup>Calculations made before rounding. <sup>3</sup>End-of-year value excluding value of gold.

Sources: U.S. Bureau of Census, Department of Commerce; ERS estimates.

**Table 7.—Southeast Asia: Selected agricultural indicators, 1983**

Country	Total area	Percent cultivated	Percent of work force in agriculture	Agriculture as percent of GDP
	<i>Million hectares</i>		<i>Percent</i>	
Burma	67.6	12	66	39
Indonesia	191.9	17	54	26
Kampuchea	18.1	11	74	NA
Laos	23.7	8	73	NA
Malaysia	33.0	22	35	23
Philippines	79.7	38	46	25
Singapore	.06	15	1	1
Thailand	51.3	64	63	22
Vietnam	33.3	20	80	45

Source: ERS estimates.

the previous year, because of further declines in the international price of rice. Most other commodities exported by Burma also fared poorly due to either weak prices (for tin, tungsten, lead, and zinc) or production difficulties (for teak and hardwood). In contrast, the primary agriculture sector produced another bumper rice crop and registered healthy gains in most others (table 9).

**Table 8.—Burma: Rice exports by destination<sup>1</sup>**

Country of destination	1979	1980	1981	1982	1983 <sup>2</sup>
<i>1,000 metric tons</i>					
North America	4	—	21	—	—
South America	34	136	10	—	—
Europe	11	52	53	46	10
USSR	5	—	30	2	—
Middle East	—	—	10	—	50
Africa	183	181	276	258	170
Gambia	15	12	12	13	—
Ivory Coast	80	54	—	52	32
Madagascar	50	55	152	60	30
Mauritius	—	—	19	18	14
Others	38	60	93	115	94
Asia & Oceania	353	305	274	396	520
Bangladesh	110	34	—	90	15
India	—	—	—	—	<sup>3</sup> 158
Indonesia	174	107	94	83	<sup>4</sup> 170
Sri Lanka	49	93	83	155	<sup>5</sup> 106
Others	20	71	97	68	71
Total	590	675	673	701	750

— = None or negligible.

<sup>1</sup>Excludes rice bran, estimated at 50,000 tons in 1983. <sup>2</sup>Preliminary.

<sup>3</sup>Carryover into 1984 on 1983 contract is 45,000 tons. <sup>4</sup>Carryover into 1984 on 1983 contract is 65,000 tons. <sup>5</sup>Carryover into 1984 on 1983 contract is 25,000 tons.

Source: American Embassy Ragoon and ERS and FAS estimates.

**Table 9.—Burma: Production of selected agricultural commodities**

Commodity	1982	1983	1984 fore.	Share of total production <sup>1</sup>
<i>1,000 tons</i>				<i>Percent</i>
Rice <sup>2</sup>	9,063	9,250	9,100	49.6
Peanuts	573	700	725	14.2
Sesame	180	204	225	7.3
Pulses	480	500	540	4.8
Vegetables	1,100	1,150	1,150	5.1
Total				81.0

<sup>1</sup>See explanatory note following the table of contents. <sup>2</sup>Based on official Burmese sources.

Sources: Government of Burma, FAS, ERS estimates.

Preliminary estimates indicate that total exports, which account for about 10 percent of GNP, fell 6.5 percent from last year's already depressed \$400 million to \$374 million because of continued weakness in world commodity markets. About 85 percent of Burma's exports are agricultural commodities. Because of deteriorating exports, Burma had to draw on its foreign exchange reserves to help pay for imports. According to available statistics, the country reined in its import growth in the latter half of 1983 by constraining capital expenditures, but not before foreign exchange reserves had slipped to only \$36 million, about one-half month's imports, in July 1983.

Economic and financial difficulties forced Burma to reduce total imports about 5 percent, to \$730 million in 1983. In 1982, imports were at \$763 million, after a half decade of 26-percent average annual growth. The PRC and Japan are Burma's largest suppliers, together capturing close to 60 percent of total imports. Next are Singapore, the United Kingdom (U.K.), and West Germany, each with about 10 percent of imports, and the United States and France, each with about 4 percent. Burma's major imports from the United States are gas and oil exploration equipment, followed by phosphate fertilizer, heavy equipment, pharmaceuticals, and aircraft parts.

Although internal assistance, which grew to over \$500 million in 1983, has substantially supported Burma's investment program, Burma must increase exports if it is to continue the steady rise in imports of capital goods essential for development. Further complicating the horizon is Burma's energy problem. Petroleum production continues to decline, with only 8 million barrels produced in 1983, a decline of about 30 percent from 1980. Despite the discovery of a large natural gas reserve offshore from Rangoon, no solution for Burma's shortage of petroleum supply has appeared. The declining production has resulted in gas rationing and diesel fuel shortages.

### **Agricultural Production Strong**

Burma's agricultural sector continued to show strong growth in 1983, primarily because of the outstanding success of the Government's rice production program. Rice production is estimated at 9.3 million tons, about matching 1982's record crop, which benefited from ideal weather. The rice improvement program accounted for most of the 80-percent increase in output over the last decade.

The program targets major rice-growing townships for the introduction and adoption of a well-designed, high-yield technology package with improved seeds, greater availability of inputs, and more efficient management. Features unique to the program, such as local government participation in production and procurement decisions, mobilization of local communities to provide additional labor, and priority allocations of consumer goods to targeted townships to supplement incomes, have helped ensure successful adoption of the high-yield package and a revitalization over the last decade of agriculture in Burma.

In the last 4 years, the techniques used in the rice improvement program have been extended with good results to other crops, including peanuts, corn, wheat, sesame, cotton, and pulses. For example, oilseed production in 1983/84 reached an estimated 964,000 tons, nearly 50 percent over 1979/80. Similarly, 1983/84 coarse grain production reached 365,000 tons, up more than 50 percent from 1979/80; pulses, 500,000 tons, up about 40 percent; wheat, 120,000 tons, up about 35 percent; cotton, 109,000 tons, up more than double; and sugarcane, 2.8 million tons, also double.

### **Agricultural Exports Continue Slump**

Agricultural exports decreased 4 percent to \$317 million in 1983. Rice export earnings held steady at \$162 mil-



lion, and accounted for 43 percent of Burma's total export earnings. Forestry products (primarily teakwood), fish, and pulse export earnings, however, declined slightly. Overcutting of accessible timber reserves and inefficient operating systems have led to decreasing supplies of forestry products for export. Recognizing these problems, the Government of Burma, with the aid of the World Bank, is updating its export-oriented teak processing industry, and expanding its domestic hardwood supply to reduce domestic use of teak. Burma's export earnings from fish fell slightly, to an estimated \$11 million in 1983, although fish exports increased from nearly nothing in 1975. Such exports result from the Government's efforts to improve Burma's rich inland and marine fisheries and to raise per capita fish protein consumption. Burma's per capita consumption of fish was only 17 kgs. in 1980 compared with more than 30 kgs. for most of its Southeast Asian neighbors.

### ***Record Rice Export Volume***

Rice exports, including rice brans, during 1984 are estimated at 800,000 tons, the highest since 1971. Indonesia, Sri Lanka, Ivory Coast, and Madagascar were the leading markets. While the export volume is now increasing, it has been hampered by Burma's reputation for low-quality rice and by constraints on handling capacity. Burma has, however, improved the quality (measured as percent broken) of its exports. In recent years, the standard export quality has been 35-percent broken, which contrasts with 55-percent broken in the early 1970's. Limited but increasing quantities of high-quality (less than 10-percent broken) rice have been exported in the early 1980's. High-quality exports in 1983 rose to more than 50,000 tons, mostly to the Middle East, compared with only 4,000 tons in 1980.

### ***Sectoral Trends in Burma's Agriculture***

Burma's agriculture sector is being basically restructured. If Government plans reach fruition, by the 1990's Burma's cropping intensity ratio (a measure of the degree of double cropping) will exceed 1.4, a dramatic increase over the current ratio of 1.2. Burmese farmers will be growing significantly more oilseeds, pulses, wheat, and coarse grains, primarily by exploiting land currently fallow in the winter. Remarkably, this increase in area is expected to occur with only modest increases in flood control and irrigation.

The Government is also planning to shift some land, which is inappropriate for rice, to other crops, perhaps as much as 400,000 hectares. Moreover, the government projects that rice area planted to high-yielding rice varieties (HYV's) will surpass 75 percent in the 1990's, up from about 60 percent in 1980. This will mean greater rice yields and production, and a large exportable surplus. If current bottlenecks in transportation, handling, storage, and milling facilities are alleviated, Burma should be exporting 1.5 to 2.0 million tons of rice by the early 1990's.

As Burma improves the quality of its rice exports, its exportable surpluses should achieve market acceptance in the Middle East and Europe. These markets will complement exports to the traditional markets in Africa, South Asia, and Southeast Asia. Burma's rich soils and abundant water supplies suggest that the country will be

very competitive in producing rice for these markets. Should wheat consumption of locally produced wheat displace some rice consumption, even the 1.5- to 2.0-million-ton export estimate may be low.

### ***Oilseeds, The Next Initiative***

Edible oil consumption in Burma is approximately 4.5 kgs. per capita, of which roughly one-third is imported. Burma aims to raise per capita edible oil usage to 9 kgs. by the late-1980's, and to about 18 kgs. in the 1990's. Self-sufficiency in edible oils is to be achieved by boosting the country's production of three major oilseed crops: peanuts, sesame, and sunflower. Production for its minor oilseed, niger, will also be increased. Burma's farmers produced about 20,000 tons of soybeans in 1983/84, but the Burmese consider them a pulse, and do not process the beans for oil. Government plans call for sharp increases in area planted to sesame, sunflower, and niger, with attention given only to introducing new varieties of sunflowers. The peanut program's objective is to boost production with only a small increase in area, by introducing new varieties and achieving greater processing efficiency with Western technology. The U.S. Agency for International Development (USAID) is providing assistance for the oilseeds program, primarily in oilseed processing.

### ***Corn Output Tied to Nascent Livestock Sector***

In 1983/84, Burma planted about 200,000 hectares of corn, more than double a decade earlier. Plans are to have 400,000 hectares of corn under cultivation in the 1990's. The Government, through its research institute, has followed a program similar to that used in rice to develop new HYV's. It has already brought out its Shwewa ("Golden Yellow") series, with four varieties currently receiving national distribution. With such HYV's, Burma should be able to improve current low yields of only 1.3 tons per hectare, about one-half of average yields in all Asian countries. As of 1982, there were nine townships in the Whole Townships Maize Program with 28,000 hectares sown to HYV. USAID is also assisting the corn program by supporting five of the nine target townships with advice on breeding, production, and marketing.

Corn has the potential to be a major export crop for Burma, as well as a major feedstuff for its slowly developing livestock industry. The similarity of potential corn growing areas in Burma with those successfully exploited in neighboring Thailand suggests that corn will become a much more important crop in the 1990's. For 1983/84, Burma's corn exports are estimated at 35,000 tons, the highest since the country began exporting corn in 1978/79.

### ***Pulses Provide Export Earnings***

Burma produces several varieties of beans and pulses (six of which are currently exported), accounting for 7 percent of Burma's export earnings in 1983. In 1983/84, Burma's farmers planted close to 850,000 hectares in nine principal pulse crops (including soybeans), a 25-percent increase over the 683,000 hectares planted a decade earlier. In the 1990's, Burma expects to have more than 1.5 million hectares under pulse cultivation,



the majority of which would be grown as a second, or winter crop. The emphasis currently is on the cultivation of butter beans and chickpeas. Chickpea is the most important pulse and is used primarily for home consumption. Increased butter bean exports are counted on to offset expected declines in the sales of black gram.

Burma's export of black gram (used in lentil soup) fell 23 percent in 1983/84 to 33,000 tons, the lowest since 1978/79. While a detailed trade breakout is not currently available for 1983, India, the PRC, Japan, and Singapore were leading markets in the early 1980's. Other pulses exported in 1983 included butter beans, Indian rice beans, and red lima beans (to Japan), chickpeas (to Sri Lanka and Singapore) and green gram (to India).

Total pulse exports in 1983 are estimated at 75,000 tons valued at \$26.2 million. Pulse exports the year before reached 93,000 tons, returning Burma to the relatively high exports it enjoyed in the early 1960's.

### ***Changing Cropping Patterns Imply Income Growth***

The preceeding examination of Government activities in agriculture suggests that major changes in cropping patterns, outside the already proven success of the rice sector, are rapidly taking place. The emergence of sunflower from nearly nothing to a major oilseed crop in less than a decade is a prime example of such change. Burma's success in transforming rice production suggests that yet unforeseen changes in cropping patterns will occur in the remainder of the 1980's and the 1990's. By exploiting modern techniques, Burma's peasant farmers, already land "rich" with farms averaging about 6 hectares, could become relatively prosperous modern farmers.

### ***1984 Prospects Remain Uncertain***

In 1984, Burma's rice exports are projected to increase somewhat, to 800,000 tons. Exports are likely to be constrained because a large rice crop in Indonesia has reduced its requirements, because many African nations face difficulties in financing purchases, and because the United States and Thailand have large exportable supplies. Good 1983/84 harvests of oilseeds and pulses should, however, enable Burma to cut vegetable oil imports substantially and to increase exports of pulses. Without a substantial increase in export earnings in 1984, international lenders may be forced to reconsider their pace of lending to Burma, where the debt-service ratio stood at 35 percent at the end of 1983. Should rice prices recover slightly, Burma's foreign exchange earnings could return to the mid-1981 level of about \$285 million. Burma's real GNP growth is officially forecast at 6.3 percent in 1984, with total exports of \$530 million.

### ***Long-Term Prospects Bright***

Longer term development prospects are very bright for Burma, given the nation's highly literate population, and largely unexploited natural resources. External assistance from Western nations and institutions has already played a critical role in Burma's early successes. Japan, for example, provides \$200 million a year, and West Germany and France about \$40 to 60 million. Japan also

has extensive agricultural representation, with agricultural attache's and technical advisors. The current U.S. development assistance of \$14 million, with only a limited number of agricultural advisors, is small by comparison. [Richard F. Nehring, (202) 447-8229]

## **INDONESIA**

### ***Austerity Measures Reverse Deteriorating External Economy***

Indonesia's sluggish economic performance continued in 1983 as estimated real GDP growth of 2.3 percent matched 1982's. Nominal GDP per capita increased to \$590, due mainly to 12.1-percent inflation (10.0 percent in 1982). Weak domestic demand, wage restraints, stiffer taxes, and generally ample food supplies moderated the inflationary effects of a 28-percent currency devaluation and sharply higher domestic fuel prices caused by reduced Government subsidies.

During 1971-81, real GDP growth averaged 7.5 percent, with booming petroleum revenues providing about 70 percent of total export earnings and Government revenues, and the basis for rapid economic growth. The recent world economic recession curtailed Indonesia's petroleum export revenues as demand faltered, forcing OPEC to reduce benchmark crude oil prices from \$35 to \$29 per barrel in early 1983. In 1983, Indonesia's gross oil export earnings fell 13.6 percent to \$11.6 billion, while revenues from liquified natural gas (LNG) sales decreased 11 percent to \$2.2 billion, despite larger export volume. However, nonpetroleum exports, including the main agricultural earners—rubber, coffee, and palm oil—rose to \$4.8 billion in 1983 from \$3.9 billion in 1982.

During 1983, several important Indonesian policy measures were introduced to address the worsening financial and monetary crisis and to set the stage for restructuring the economy and adjusting to reduced oil revenues. They included substantial reductions in fuel and food subsidies, currency devaluation, budget austerity, deferment of large capital projects, and tax reform. The new policies proved beneficial in 1983: Non-oil exports increased, imports remained stable, the balance-of-payments deficit declined, capital outflows were reversed, and international reserves increased 18 percent to \$3.7 billion. The current account deficit declined to around \$5 billion in fiscal 1983/84 (April-March) from \$6.7 billion a year earlier. An estimated \$22.0-billion public sector foreign debt on December 31 compares with \$17.5 billion a year earlier.

Agriculture's 1983 growth of about 6 percent compared with a slight decline in 1982 and 1978-82 average growth of 5.6 percent. Dry-season crops rebounded from drought-reduced 1982 levels. Output gains were registered for rubber, coffee, palm oil, tobacco, tea, sugarcane, and secondary food crops. Production of rice, the dominant food staple, held firm, but copra output declined (table 10). Per capita availability of foodstuffs increased in 1983 and was about 28 percent greater than in 1969-71. Despite this impressive growth the agricultural sector contributes only a fourth of total GDP, far below its contribution of more than 50 percent a decade ago.



**Table 10.—Indonesia: Production of selected agricultural commodities**

Commodity	1982	1983	1984 fore.	Share of total production <sup>1</sup>
	1,000 tons			Percent
Rice (milled)	23,191	23,462	24,500	41.5
Cassava	12,673	13,770	14,000	8.8
Sugarcane	21,794	22,300	22,500	8.4
Rubber	861	1,017	1,050	8.1
Coconut (copra equiv.)	1,711	1,600	1,630	6.2
Palm oil	838	875	950	6.1
Coffee	287	294	300	2.9
Total				82.0

<sup>1</sup> See explanatory note following the table of contents.

Sources: Government of Indonesia, FAS, ERS estimates.

### **Wide Variation in Farm Sizes and Types**

Indonesia's agricultural sector consists of two main groups of operators: 14 million small farmers cultivating about 14 million hectares of food crops for domestic use and sometimes for export; and about 2,000 large plantations comprising more than 810,000 hectares and producing perennial crops such as rubber, oil palm, coffee, and tea. Even though the plantation sector generates a large portion of Indonesia's nonpetroleum foreign exchange earnings, small farmers contribute about 60 percent of agricultural sector GDP and employ 54 percent of the labor force. Rubber and coffee are examples of plantation crops that are also produced by small farmers. Plantations produce 30 percent of Indonesia's rubber, 10 percent of its coffee, and nearly all of its palm oil.

### **Rice Production Stable, But Imports Sharply Higher**

Rice, the traditional Indonesian food staple, accounts for about 40 percent of total food crops value and about 50 percent of daily national caloric intake. After the introduction of HYV's to Indonesia in 1968, rice output grew at an average annual rate of 8.2 percent through 1982. During 1977-82, growth averaged 7.7 percent.

The country's 1983 overall rice output of 23.5 million tons was up 1.2 percent from 1982. Wet-season production, the bulk of annual rice output, was restricted by a late monsoon. However, the dry-season outturn was well above that of drought-plagued 1982. Despite a reduced Government subsidy for fertilizer, prices relative to support prices for rice remained conducive to continued high fertilizer use. Rice imports of 1.2 million tons in 1983, again ranking Indonesia as the world's leading rice importer, were sharply higher than the 332,000 tons of a year earlier.

Indonesia's remarkable success in increasing rice production since the 1960's is mainly due to its intensified efforts. These include extended credit, improved seed varieties, subsidized fertilizer and chemical inputs, farmer training, irrigation, and providing remunerative Government support prices. The greatest potential for further success in boosting rice production is on major islands other than Java, including Sumatra, Sulawesi, Irian Jaya, and Kalimantan where these efforts are not far advanced.

Rice intensification programs have been broadened in recent years to allow more local area and farmer decisionmaking. The popularity of the original program, BIMAS (mass intensification), waned because of its inflexibility. BIMAS required participating farmers to accept the standard package of inputs and credit without consideration of local and individual needs. Under the INSUS (special intensification) program initiated in 1979, groups of up to 50 farmers made collective decisions about land preparations, planting, spraying, and harvesting schedules. Orders for inputs are coordinated and data for receiving credit and making payments on loans are determined for all participants in the group. The purpose of INSUS is to raise management quality and debt-repayment responsibility for all group members up to the level of the most progressive members. INSUS, like BIMAS, operates only in areas of guaranteed irrigation. It will be extended until all irrigated rice areas are covered.

### **Production of Secondary Food Crops Rebounds in 1983**

The major secondary food crops produced in Indonesia are corn, cassava, sweet potatoes, soybeans, and peanuts. Corn, cassava, and sweet potatoes are important in the diets of the lowest income groups, although rice is preferred if available and affordable. Food use of soybeans and peanuts, as a cheaper source of protein than meat and poultry, is growing rapidly. These crops are usually grown in rotation with rice, where limited irrigation water limits rice multicropping, and separately or in rotation with each other on unirrigated land.

Production of all the major secondary food crops rebounded in 1983 from 1982's poor harvests during the severe May-December drought. The 1982 drought resulted in a very compressed 1983 main-season rice harvest, putting extensive pressure on the overall harvest system, storage, and milling. Some land that normally would have been replanted to rice was diverted to secondary food crops. Corn area was increased 55 percent to 3.2 million hectares, with a corresponding 56-percent gain in output to 5.0 million tons. In the relatively small but growing poultry, dairy, and swine sectors, almost 20 percent of Indonesia's corn is used in livestock feeds.

Other 1983 gains in secondary food crop output were registered for cassava (9 percent), sweet potatoes (12 percent), peanuts (5 percent), and soybeans (15 percent). Soybeans imported for food use come mainly from the United States. In July, the Government authorized its first soybean crushing plant (capacity of 300,000 tons annually), but construction has not started. Soybean meal is currently imported mainly from Brazil, with the United States a major competitor.

### **Strong Wheat Use Uptrend Continues**

Wheat, although not grown in Indonesia, is an important supplement to rice and secondary food crops in the Government's food stabilization program. Per capita use increased 7 percent in 1983 to 10.5 kgs. (6.6 percent of per capita rice use), with the United States supplying 933,000 of the 1.71 million tons imported. Other suppliers and their market shares were Australia, 21 percent; Canada, 12 percent; France, 9 percent; and Argentina, 3 percent. Of the concessional 107,000 tons import-

ed in 1983, the United States supplied 77 percent; Australia, 19 percent; and France, 4 percent. Two of Indonesia's three flour mills are expanding the capacity of grinding, unloading, and storage equipment. For a few years after the expansion of facilities is completed, Indonesia will be in position to export wheat flour and products primarily to other Asian countries.

### ***Domestic Vegetable Oil Supplies Tighten; Prices Rise***

Indonesia's edible oil sector is dominated by coconut and palm oils—each accounting for over 40 percent of total consumption. Palm kernel and other oils play a minor role. The coconut sector, with production almost exclusively by small farmers, has suffered from neglect and inadequate investment, which has led to a shortage of copra for crushing.

By the mid-1970's, Indonesia was importing large amounts of coconut oil for domestic needs, costing roughly \$1,000 a ton, while exporting large quantities of crude palm oil for about half that price. The Government was determined to save foreign exchange by diverting the cheaper crude palm oil from exports to domestic consumption, despite strong taste preferences for coconut oil. To do this, the Government implemented a system of mandatory allocations and price controls, which are still operative. A Government marketing board allocates specific amounts of crude palm oil from each plantation to each processor. After domestic allocations are filled, the remainder can be exported at world prices.

The country's coconut production (copra equivalent) declined 6.5 percent to 1.6 million tons in 1983 because of the prolonged 1982 drought, which lowered copra quality and ultimately the supply of coconut cooking oil. Indonesia's 1983 production of crude palm oil rose 4.4 percent to 875,000 tons. However, Malaysian output declined 14 percent from 1982, Philippine copra exports were banned, and the United States payment-in-kind (PIK) program contributed to a sharp reduction in planted area of soybeans. The drought in U.S. soybean producing areas further tightened 1983 world vegetable oil supplies. World vegetable oil prices responded by moving sharply higher in late 1983. Domestic shortages of vegetable oils resulted, despite Government controls. Indonesia responded by banning copra and coconut oil exports last August. In January 1984, the Government sharply increased domestic palm oil prices, imposed export taxes, and subsequently banned shipments of palm oil and products temporarily.

### ***Imports of Fresh Fruits and Processed Fruits and Vegetables Halted***

In 1983, in actions designed to reverse the country's deteriorating balance of trade, the Government regulated imports of so-called luxury foodstuffs, including fresh fruits and processed fruits and vegetables. Indonesia is seeking to increase its own production of fruits such as apples, oranges, and grapes and to further develop its own vegetable producing and processing industries. Although two Government trading firms were appointed and licensed exclusively to import fresh and canned fruits and other commodities designated as luxury foodstuffs, no imports occurred because of Government

regulations. Imports of such fruits and vegetables have virtually ceased. When, or if, the de facto ban on importing these designated items will be lifted is highly speculative, given recent improved trade performance.

### ***Agricultural Trade Surplus With United States Up***

In 1983, agricultural products accounted for about 11.6 percent of an estimated \$18.6 billion in exports. Agricultural imports were 8.1 percent of the estimated \$18.5 billion in merchandise imports. The value of U.S. agricultural exports to Indonesia was \$419 million, 6 percent below 1982. Major commodity shares were wheat, 38 percent; cotton, 23 percent; soybeans, 22 percent; rice, 7 percent; and soybean meal, 3 percent.

Europe, the United States, and Japan are major markets for Indonesia agricultural exports. U.S. agricultural imports from Indonesia totaled \$567 million, 18 percent above 1982. Major commodities and their shares were rubber and allied gums, 59 percent; coffee, 26 percent; spices, 6 percent, and tea, 5 percent. The U.S. agricultural trade deficit with Indonesia in 1983 was \$148 million, 290 percent more than in 1982.

### ***Moderate Economic Growth Anticipated Through 1988***

Indonesia's economic fortune is closely linked to oil export revenues, which remain sharply lower since 1981 because of the world economic recession. Real GDP growth of 3 to 4 percent is expected in 1984 as the country's economy continues its slow recovery with its strict austerity measures still in effect. The Government budget for fiscal 1984/85 (April-March), the first year of Repelita IV, the nation's fourth 5-year development plan, anticipates a further decline in total export revenues from oil and non-oil commodities, stiffer taxes, higher domestic fuel prices (reduced fuel subsidy), and the elimination of food subsidies.

The development budget for 1984/85 maintains its relative share of the overall budget, although falling an estimated 4 percent in real terms. The austerity program continues to postpone or reschedule many industrial projects and may help lower the worrisome current account deficit to about \$2 billion by April 1985. The country's foreign debt will remain manageable if not reduced. LNG exports may double, petroleum sales improve, and rubber, palm oil, and possibly coffee earnings should rise. Overall export revenues may increase in 1984.

Due to an excellent monsoon season, the agricultural sector may register real growth of 4 to 5 percent in 1984, paced by a like gain in rice output. Production increases are also anticipated for rubber, palm oil, and secondary food crops, among others. Commodity prices for the major export crops should average higher than in 1983, as world economic recovery continues, increasing export earnings.

In 1984, Indonesia will import larger quantities of several agricultural commodities including wheat, soybean meal, and cotton. U.S. agricultural exports to Indonesia in fiscal 1983/84 (October-September) are projected at a record \$456 million, 11 percent more than a



year earlier (table 1). Leading commodities and their shares of projected total sales include wheat, 35 percent; cotton, 29 percent; and soybeans, 20 percent.

Repelita IV, continues through March 1989. It assumes annual average real economic growth of 5 percent, no increase in petroleum prices, continued budget austerity, and an increasing role for the private sector. Average growth of 5 percent would be about 50 percent less than over the previous decade. Over the 5 years, President Suharto wants to reduce the share of oil and gas in export earnings from 71 percent to 65 percent, and equally significant, the share of oil and gas in domestic revenues from 64 percent to 55 percent.

Broad agricultural developments will be undertaken during Repelita IV, with their key aim to achieve and maintain self-sufficiency in rice production and to increase production of other food crops. Emphasis will be on opening up new agricultural land, increasing production of plantation crops such as rubber, palm oil, and sugar for export, and on fishing and forestry. Particular emphasis will be placed upon development of industries that process food and plantation crops, and fish and timber products, especially for export. The Government is emphasizing job-creating industrialization and value-added exports. [*J. Albert Evans, (202) 447-8229*]

## **MALAYSIA**

### ***Economic Growth Edged Higher In 1983 Amid Fiscal Austerity***

Malaysia's real GDP rose 6.0 percent in 1983, compared with 1982's recessionary low of 5.2 percent. All sectors of the economy except agriculture and Government contributed to this growth. Per capita nominal GDP increased to \$1,983, and inflation declined to 4.0 percent (5.8 percent in 1982). Yet, current GDP growth is well below the 8-percent average growth realized during the 1970's and targeted for the 1980's.

Since mid-1982, the Government has followed a policy of fiscal austerity by limiting spending to 1981 levels to reduce budget deficits and external borrowing requirements. In reducing expenditures, the Government is depending more on the private sector to generate and maintain economic growth. Various public services and enterprises are being shifted to the private sector. A significant aspect of this fiscal conservatism was a major cut in 1983 Government development expenditures.

### ***Stronger Export Economy Yields Higher International Reserves***

Improved 1983 demand and prices for several of Malaysia's major exports such as rubber, palm oil, and sawn timber generated an estimated merchandise trade surplus of \$500 million, compared with a deficit of \$600 million in 1982. The current account deficit declined to about \$2.8 billion, compared with \$3.3 billion in 1982. Foreign exchanges reserves (excluding the value of gold) increased \$443 million to total \$4.3 billion, equivalent to about 4 months of retained imports, at year's end.

## ***Malaysia Diversifies Economic Base***

Over several decades, Malaysia has evolved from an agricultural based economy dependent on rubber and tin exports to a well-diversified economy exporting electrical components and products, rubber, tin, petroleum, LNG, palm oil, cocoa, and other goods. In recent years, the manufacturing base has expanded rapidly. The industrial sector contributes about a fifth to GDP, and provides employment for over one-sixth of the work force. Leading 1983 exports and their percentage of total export earnings were manufactured goods (29 percent), petroleum (24 percent), rubber (11 percent), sawlogs (10 percent), palm oil (9 percent), and tin (5 percent).

Malaysia, a nonmember of OPEC, has known petroleum reserves officially estimated at about 2.8 billion barrels, which should last 25-30 years at recent production rates. The country will remain a net exporter of high-quality, low-sulfur crude oil at least through the next decade. Oil exploration in Malaysia continues and the country is proceeding to further exploit large natural gas deposits. The Bintulu LNG plant in East Malaysia is expected to eventually earn Malaysia \$1.2 billion a year in exports. Taxes on petroleum account for about an eighth of Government revenues.

### ***Poverty Persists in the Important Agricultural Sector***

Although agriculture's relative importance in the economy has declined, the sector currently accounts for 23 percent of GDP, provides employment for 40 percent of the work force, and contributes 25 to 30 percent of export earnings. Malaysia has a strong comparative advantage in producing tropical tree crops, especially rubber and palm oil, on large, efficiently managed estates. However, the persistent high incidence of poverty among small farmers remains a major concern of economic policymakers.

Small producers of rubber, rice, coconuts, and tobacco continue as beneficiaries of Government policies and programs designed to increase farm productivity. For example, small rice farmers are supplied with free seed and fertilizer, low-interest production credit, free irrigation water, and subsidized agricultural chemicals. Government officials continue to seek solutions to rural poverty, such as encouraging migration away from overpopulated rural areas to new Government land development operations. These families obtain ownership of farmland in exchange for a long-term commitment to work the land efficiently as part of an overall centralized management scheme.

### ***Palm Oil, Rubber, and Rice Dominate Agricultural Output***

Total agricultural sector output declined 3 percent in 1983 because of a sharp drop in palm oil production. In 1982, agricultural output rose 7 percent. Malaysia's major export crops, palm oil and rubber, together accounted for more than half of total agricultural output. With rice included, the three accounted for about two-thirds of total output (table 11). Of the estimated 4.0 million hectares planted in these crops in 1983, rubber occupied 2.0 million; oil palm, 1.3 million; and rice, 764,000.

**Table 11.—Malaysia: Production of selected agricultural commodities**

Commodity	1982	1983	1984 fore.	Share of total production <sup>1</sup>
	1,000 tons			Percent
Rubber	1,517	1,500	1,550	28.3
Palm oil	3,512	3,018	3,600	25.1
Meat, eggs, milk	387	399	410	16.6
Rice (milled)	1,199	1,174	1,265	13.4
Bananas, pineapples	623	625	625	5.7
Palm kernels	911	833	965	4.0
Total				92.1

<sup>1</sup>See explanatory note following the table of contents.

Sources: Government of Malaysia, FAS, ERS estimates.

**Rubber**—Malaysian rubber production of 1.5 million tons in 1983 was virtually unchanged from a year earlier despite higher prices. It still accounts for about 40 percent of world natural rubber output, although Malaysian rubber production remains below its 1976 peak of 1.6 million tons. More land continues to be converted from rubber to more profitable crops, especially oil palm, than is planted to rubber on newly developed land. Late in 1983, rubber growers were realizing only one-third to one-half as much income per hectare as palm oil growers realized, because of relatively high palm oil prices.

The Government is striving to maintain Malaysia's current position as the world's leading rubber producer. A Government task force is reviewing the structure of rubber production and demand, considering developments within the natural and synthetic rubber industries. Meanwhile, research is underway to determine if mechanized rubber tree tapping can be introduced successfully to reduce labor requirements.

**Palm Oil**—Malaysia, by far the world's largest palm oil producer (54 percent of world production) and exporter (75 percent), produced 3.0 million tons of palm oil in 1983. This was 14 percent below 1982's lofty record output, temporarily reversing a long-term uptrend in both palm oil production and total agricultural output. The unusually large 1982 harvest resulted mainly from introducing Cameroon weevils to enhance pollination. The production decline in 1983 has been attributed mainly to biological stress in attaining 1982's record increase in production and to relatively dry weather in several major producing areas. Another contributing factor was lower fertilizer use in 1982 when palm oil prices were depressed. Over the last decade, the great expansions of palm oil area and production have been the most dynamic features of Malaysian agriculture.

**Rice**—Rice output continued to decline in 1983, to 1.17 million tons (75 percent of consumption), 2 percent less than in 1982 and 14 percent less than 1979 record output. Progress in plant breeding, extension, and mechanization has been more than offset by disease, abandonment of rice land, and problems with irrigation water management. Harvested rice area has declined 8 percent since 1979, mainly in nonirrigated regions where rainfall is usually adequate for only one good rice crop. Thailand, being nearby, supplies nearly all Malaysian rice imports in most years.

The Government is seriously concerned about the increasing abandonment of paddy fields, mostly without irrigation, that are no longer planted even in the rainy season. Such abandoned area is gradually expanding as rural people leave the land or turn to other occupations. The Government is considering various approaches including collective farming to bring such land back into production. The total area in abandoned land suitable for rice production may exceed a fourth of the total rice area harvested.

**Wheat**—Imports of wheat (not produced in Malaysia), trending upward an average of about 4 percent annually, totaled 550,000 tons in 1983, 1.5 percent above 1982. Malaysia's millers are becoming more familiar with U.S. wheat in producing various types of flour for noodles, bread, and biscuits. While wheat is mainly supplied by nearby Australia, the United States has increased its share of imports to about 25 percent in recent years.

**Corn**—Malaysia imports about 98 percent of its corn requirements (925,000 tons in 1983), almost exclusively for feeding poultry and swine. Broiler and egg production are Malaysia's major livestock industries, with 1983 output estimated at 125,000 and 120,000 tons, respectively. Although pork production has been expanding as rapidly as broiler output, further expansion may be limited by increasing concerns about pollution.

Corn usage increased an average of 11 percent annually since 1978, reflecting consistent growth of these industries. Thailand continues to supply most imported corn. Thai corn is preferred by many importers because its grown nearby, which means it has a shorter finance period, it is available in bags, and is deep yellow. Bulk grain silo storage at or near several major ports has increased sharply since two soybean crushing plants opened in 1980. Malaysia's grain importers actively seek low-cost suppliers of mixed lot 20,000- to 25,000-ton cargoes, which can be discharged at more than one port or shared by more than one buyer.

**Soybeans and products**—Soybean meal produced by Malaysia's two soybean crushing plants, and imported soymeal are major ingredients in livestock feeds. Tariffs to protect the relatively new crushing industry were insufficient to keep out lower priced Chinese and Brazilian soymeal. Licensing such trade since mid-1983, Malaysia has been successful in limiting soymeal imports. Consequently, soybean imports by Malaysia's crushing mills are expected to again increase. Total soybean imports, which totaled 215,000 tons in 1983 and were predominantly for feed use, increased 19 percent from 1982.

#### **Agricultural Trade Surplus With the United States Up 44 Percent**

U.S. agricultural exports to Malaysia decreased 9 percent to \$131 million in 1983. Exports of soybeans (\$26.6 million), unmanufactured tobacco (\$24.3 million), wheat (\$23.6 million), fruits and preparations (\$21.2), and cotton (\$10.9 million) accounted for 81 percent of the total. U.S. agricultural imports from Malaysia totaled \$321 million, 16 percent more than in 1982, with rubber, palm oil, and palm kernel oil accounting for 88 percent of the total. The country's agricultural trade surplus with the United States rose 44 percent from 1982.



## ***Stronger Economic Recovery In 1984 and Beyond***

The Malaysian economy is expected to strengthen further in 1984, as real GDP expands by 7 percent or more. Economic planners want to realize continued economic growth while they reduce budget and current account deficits. The Government's current fiscal conservatism is reflected in the sharply reduced 1984 development budget. Greater export demand for Malaysian commodities (including crude petroleum and LNG) and manufactures, and a strong recovery in the growth of private sector spending will strengthen the country's economy.

Overall agricultural output will rebound, and increase 5 to 7 percent in 1984, spurred by a sharp rebound in palm oil production to near 3.6 million tons. Gains in other commodities such as rubber, palm kernels, cocoa, rice, pork, and poultry are envisioned. Prices should average higher than in 1983 for such major agricultural export commodities as natural rubber, palm oil, palm kernel oil, cocoa, pepper, and sawn timber. Import volume of several major commodities including rice, wheat, corn, and soybeans will increase.

The United States will likely export to Malaysia in fiscal 1983/84 (October-September) larger quantities of several agricultural commodities including (1) poultry meats, (2) wheat, (3) cotton, (4) fruits, and (5) vegetables. The volume of soybeans may decline slightly from a year earlier because of higher prices, but their value could increase 30 percent to about \$40 million. Total U.S. agricultural exports to Malaysia could reach a record \$148 million in fiscal 1983/84 (table 1). Leading commodities and their shares of projected total sales are soybeans, 27 percent; fruits, nuts, and preparations, 16 percent; wheat and products, 14 percent; tobacco, 18 percent; and cotton, 11 percent.

Beyond 1984, Malaysia's economic growth rate will depend heavily on economic progress in the United States, Japan, and Western Europe, and on continued access to foreign markets. If the increasingly broad-based world economic recovery continues, Malaysia's 1985 real GDP growth could be 7 to 9 percent.

Worried about its lagging farm output, Malaysia recently unveiled the National Agricultural Policy (NAP), a new long-term policy document to guide Government planners until the year 2000. It acknowledges that an array of problems have recently hampered agricultural expansion and set back efforts to eradicate rural poverty, particularly in the small farms. Specific problems for small farms include increases in idle and underused farm acreage, inefficient production methods, and labor shortages.

The new policy calls for Malaysia to concentrate even more on high-profit crops, such as oil palm and cocoa, and to increase farm productivity through such innovations as mechanization and pooling of land. The plan does not call for large new Government investment in rural programs. Moreover, the NAP drops a long-held goal of self-sufficiency in rice production. It also discourages stepped-up beef and dairy production and planting crops for animal feed. The plan calls for continued opening of new agricultural land and for greater production efficiency on existing land. It also recommends

continued Government support services for farmers, such as credits and extension advice. Central management would be introduced to consolidate small uneconomic plots of unused land into larger plots to improve productivity and facilitate mechanization. [J. Albert Evans (202) 447-8229]

## **PHILIPPINES**

### ***Sluggish Economy Slows***

The Philippines' economy grew 1.4 percent in 1983 (2.8 percent in 1982), as promising first-half growth languished when signs of financial insolvency began surfacing in June. Concurrently, the 2.6-percent rise in population led to a further deterioration of real GNP per person, with per capita income estimated to be \$730 in current prices. In addition, the economic slowdown and rising inflation translated into a substantial fall in household savings as consumption grew 3 percent, outpacing income growth. The 10-month drought, which began affecting several regions in September 1982, lowered farm output and its share of GNP to 25 percent in 1983. Agricultural exports rose slightly to about \$1.6 billion; yet, with a 11-percent drop in imports, the agricultural trade surplus rose to \$900 million. Shortages of goods, such as pineapples, sugar, and mangos, prevented the Philippines from exporting larger volumes to compensate for low prices.

The widening balance-of-payments deficit, aggravated by active peso speculation, prompted an official devaluation of the peso on June 23, 1983 (table 12). This represented a 20-percent depreciation against the U.S. dollar, since the onset of 1983. The peso similarly depreciated against other major currencies. The 1982 record \$1.1-billion payments deficit and an already heavy debt-service schedule made financing a similar 1983 deficit unsustainable. By the end of the third quarter of 1983, the deficit grew to \$1.36 billion, reserves dwindled to \$430 million, a surge of capital outflow occurred, the peso was officially devalued an additional 21.4 percent (with 14 pesos equaling \$1). The Philippines asked for a 90-day moratorium on the principal payments due on its \$25-billion debt.

By allowing international reserves to fall to critical levels, import financing was severely disrupted in the final quarter. This triggered production cutbacks for the significant number of industries dependant upon raw material imports, as well as a 25-percent rate of inflation and shortages of basic commodities.

Imports rose 22 percent, in pesos, in 1983. However, accounting for devaluations, imports fell about 3 percent to \$7.5 billion (f.o.b.). Trade financing and all foreign exchange receipts converged at the Central Bank so that scarce resources might be allocated to essential imports. The priorities are oil, official development assistance loans, inputs to export products, raw materials for vital domestic industries, food grains, interest on bank loans and inter-bank loans, and trade related credit.

By the end of third-quarter 1983, the value of the Philippines' major exports—semiconductors, garments, sugar, copper, and coconut oil—were trailing those of 1982. Besides lower prices, the peso devaluations lowered the dollar earnings from exports, and because of drought-reduced agricultural supplies, greater shipments could



**Table 12.—Balance of payments summary of the Philippines**

	1978	1979	1980	1981	1982	1983 estimate
<i>Billion dollars</i>						
Merchandise trade						
Exports	3.42	4.6	5.79	5.72	5.0	5.0
Agricultural products	1.44	1.69	2.0	1.89	1.57	1.6
(%)	42	37	34	33	31	32
Imports	4.74	6.14	7.72	7.95	7.7	7.5
Agricultural products	.38	.45	.59	.66	.79	.7
(%)	8	7	8	9	10	9
Services (net)	-.18	-.39	-.55	-.54	-1.2	-.7
Private transfers (net)	.28	.23	.3	.3		
Official transfers (net)	.03	.13	.13	.15	.5 <sup>1</sup>	.3 <sup>1</sup>
Current account balance <sup>3</sup>	-1.17	-1.58	-2.05	-2.3	-3.4	-2.7
Direct Investment (net)	.17	.1	.04	.4	.25	.04
Private MLT loan						
capital (net)	.21	.16	.5			
Public MLT loan				1.3 <sup>2</sup>	1.5 <sup>2</sup>	1.4 <sup>2</sup>
capital (net)	.26	.33	.17			
Short term capital (net)	.17	-.05	.78	.19	.57	-.9
Capital account balance <sup>3</sup>	1.23	1.2	1.86	1.93	2.37	.6
Errors & omissions	-.14	-.26	-.35	-.61	-.67	.5
Foreign reserve level	1.76	2.25	2.85	2.2	1.76	.79

<sup>1</sup>Total transfers; breakdown of private and public transfers unavailable. <sup>2</sup>Total loan capital; breakdown of private and public transfers unavailable.

<sup>3</sup>Figures may not add due to rounding.

Sources: Central Bank, Manila; International Financial Statistics; ERS estimates.

not significantly offset this decline. Manufactured goods, generally accounting for about half of exports, had grown 4 percent; yet, with imports of raw materials stifled, production slowed. The fluidity surrounding Philippine trade produced a net deficit of \$2.5 billion, which was, however, an improvement of nearly 7 percent from 1982.

The Philippine economy relies heavily on trade, agriculture, and Government spending—all three deteriorated in 1983. With imports comprising about 20 percent and exports about 17 percent of GNP, economic growth is heavily dependent upon trade. Imports supply about 65 percent of the Philippines' petroleum needs, and nearly 40 percent of exports are bulk commodities, causing economic growth to be highly susceptible to price swings.

In recent years, countercyclical Government spending has helped offset the dampening effect of low commodity prices and higher oil bills. Foreign loans largely financed this spending because revenues and foreign investment were inadequate. The slight growth that occurred in GNP resulted from the reduced, but remaining, spending in the Government-sponsored construction and service sectors. High interest rates discourage commercial financing of construction projects, and in line with ongoing austerity measures, many of the 11 major industrial projects outlined in the Philippines' 1983-87 development plan have been shelved.

The usually resilient agricultural sector also faced a downturn in 1983 as drought and shortage of credit handicapped productivity (table 13). Also, the continuing decline of investment in agriculture was evident again in 1983. During 1968-80, agro-based investments composed 26 percent of total investment, yet was only 4 percent in 1983. To attract investors, changes in the marketing

and distribution network need to accompany research, as well as tax and financial, incentives.

### ***Drought Checks Overall Agricultural Output***

Farm output in 1983 declined 2.1 percent (in real gross value added), compared to growing 3.5 percent in 1982. Drought began affecting the coconut and corn crops of the central and southern islands in September 1982, and by June 1983, sugar plantings had been delayed and the pineapple, banana, vegetable, and secondary rice crops had been severely stunted. Growth in livestock and poultry meat production resulted from stock building and adequate feed supplies. Furthermore, while actual 1982/83 sugarcane tonnage was lower than a year earlier, a rise in sugar purity produced 2.8 million tons of raw sugar, nearly 5 percent above 1981/82.

**Table 13.—Philippines: Production of selected agricultural commodities**

Commodity	1982	1983	1984	Share of total production <sup>1</sup>
Rice	5,025	4,875	5,070	24.9
Copra	2,080	1,870	1,804	14.3
Sugarcane	24,213	21,790	22,000	11.6
Pork	457	500	486	10.0
Corn	3,126	3,282	3,380	9.2
Pineapple	889	800	860	2.8
Bananas	1,261	1,240	1,260	2.6
Total				75.4

<sup>1</sup>See explanatory note following the table of contents.

SOURCE: Govt. of the Philippines, FAS; ERS estimates.

Tight 1983 fertilizer supplies further dampened farm output. Domestic fertilizer production increased 30 percent, to 164,200 tons; yet, the 21-percent decline in imports lowered total 1983 supply 11 percent to 613,400 tons. For crops, it is estimated that 44 percent of the total is used on rice, 37 percent on sugar, 5 percent on corn, 6 percent on bananas and pineapples, and the remaining 8 percent is spread among cotton, tobacco, coffee, and vegetables. Fertilizer consumption is estimated to have fallen 8 percent from a year earlier, reflecting both fertilizer price increases of 36 to 45 percent following the peso devaluations and the tight supply following the country's disruption of imports in the fourth quarter.

### ***Rice Output Still Declining***

Rice production, at 4.9 million tons, will likely be 3 percent below the 1982/83 crop (July/June), which had fallen 5 percent from 1981/82. Both downturns are drought related. The secondary 1982/83 (April-June harvested) rice crop harvested area was 6 percent less than a year earlier. The sporadic 1983 monsoon delayed planting and harvesting of the 1983/84 main crop by 10 to 12 weeks, and left many irrigation systems unreplenished. This threatened to lessen the secondary 1983/84 crop. Further setbacks to rice farmers include expensive credit and higher input costs. The Government has raised the rice price two times in recognition of increased production costs, lifting the farmgate price for unmilled rice 24 percent since June. Private traders have been surpassing the support price of P 2.10 per kg. (about 19 cents), which has kept the Government buying agency from amply rebuilding stocks for market during the lean (June-August) period.

Weather in the major corn-producing areas of Mindanao began returning to normal in June 1983, and despite reduced fertilizer and pesticide use, 1983/84 (July/June) production is expected to rebound 5 percent to nearly 3.3 million tons. Because of the drought-related losses to the 1982/83 corn crops, record imports of 557,000 tons were used to meet livestock feed requirements. About 55 percent of domestic output went toward food uses, such as corn grits, which is estimated to be 10 to 12 kgs. per person.

### ***1984 Sugar Harvest Delayed; Imports Needed***

The full effects of the drought did not appear in the 1982/83 (September/August) sugar season, when improved sugar content and enlarged harvests in other areas compensated for lower cane tonnage in the central islands. Instead, production grew slightly to 2.52 million tons. Sugar producers received 24 cents per kg. for the crop, with a differential allocated quarterly from export earnings, which averaged 36 cents per kg. Although this represented a 15-percent increase in millgate prices, it did not keep pace with the depreciation of the peso and with subsequent higher costs of fertilizer and labor. This is expected to curb fertilizer use on the 1983/84 sugar-cane crop, which was further hampered by late plantings because of insufficient water. By yearend 1983, the 2-month postponement of the 1983/84 harvest season (to November), the acceleration of exports to earn much-needed foreign exchange, and panic buying resulted in a sugar shortage. The Philippines imported a highly unusual estimated 400,000 tons of sugar.

### ***Coconut Production Declines***

The marked decline in coconut production began after mid-1982, and will likely continue into June 1984. This partially reflects the duration of the September 1982-June 1983 drought, with a 12-month lag. Total 1983 copra production fell 10 percent to 1.87 million tons. Relatively higher coconut oil prices, the pending fall in copra output, and the country's need to maximize export earnings prompted restrictive measures to divert as much copra to coconut oil production as possible. As a result, oil exports surpassed 1.0 million tons, climbing 5 percent over 1982 exports. The decline in the U.S. soybean and Malaysian palm crops helped bring coconut oil prices roughly 70 percent above yearend prices of 1982.

Other crops varied in resistance to the drought. The 13-percent decline in (August/July) 1982/83 cotton production, to 4.5 tons, was due to a 31-percent decline in cotton area, although the drought did decrease cotton quality. However, the change in policy to encourage higher productivity rather than area expansion removed marginal areas from production and improved yields. Burley and Virginia leaf tobacco production reached records as rising domestic and foreign demand induced area expansion; dryness in the tobacco producing regions facilitated tobacco harvesting and curing. The drought lowered coffee, pineapple, and banana production, with declining foreign demand further dampening the banana industry.

### ***Healthy Growth in Livestock Reverses in 1983***

The livestock and poultry sectors began 1983 with high inventories and a comfortable feed supply. However, currency devaluations and import restrictions in 1983 led to inadequate supplies of feed, crucial vaccines, and breeding stock. Production of beef and veal meat rose slightly to 188,000 tons, pork meat reached 500,000 tons (up 9 percent), and poultry meat neared 183,000 tons (up 2 percent).

Since the July 1983 devaluation, retail corn and soybean meal prices have risen over 40 percent, with the 1983-average corn and soybean meal selling price to millers 17 percent and 19 percent (respectively) above the Government's f.o.b. import cost. To limit the impact of higher costs, there was greater substitution of alternative feed supplies, such as copra meal and cassava. Yet, pressure on feed and transportation costs had translated into higher retail prices. The 1983 retail price of chicken averaged 50 percent higher at \$2.70 per kg. and eggs ranged from \$.90 - \$1.05 a dozen (depending on size)—inflating over 30 percent during the year. Equally strong price movement appeared in the retail pork market.

### ***Farm Policy Adapts to Financial Crisis and Reduced Output***

Several agricultural policy changes occurred in 1983 in response to the drought and the ongoing financial crisis. In light of rising costs of production, official support and retail prices were raised for a number of commodities. The current support prices for the country's major staples of rice and corn are \$190 a ton and \$118 a ton, respectively. And the Price Stabilization Council increased prices for pork, poultry, milk, cooking oils, sugar, and eggs.



On December 6, the Government temporarily assumed distribution of wheat flour from private dealers and flour millers as a measure to prevent hoarding and price speculation. This situation was preceded by the tightening foreign exchange availability, which cutback imports (no domestic wheat production). Retail flour prices are set at about \$12 per 25-kg. bag, which is roughly 60 percent above prices prior to July 1983. A 5-percent sales tax has also been initiated.

A proposal to return sugar trading to the private sector is pending, although the Government's National Sugar Trading Corporation (NASUTRA) will likely continue to exist, as one of many traders. The Government, through the Philippine Sugar Commission (PHILSUCOM), will likely continue to regulate trading, domestic retail prices, and the allocation of sugar between the export and domestic markets.

Copra exports were banned in June 1983 to assure millers adequate supplies and to earn greater revenues, from the higher value-added coconut oil. On November 3, export duties on coconut products were raised to (old value in parenthesis): Coconut oil—9 percent (4 percent); copra meal /cake—5 percent (4 percent); and copra—10 percent (7 percent).

Import duties were raised from 3 to 5 percent, contrary to earlier efforts to reduce tariff barriers, but viewed as necessary to counter foreign exchange outflows. Further controls include:

- commercial imports of dairy products suspended
- partial ban on fresh fruits, liquor, and wine
- all imports must have Government approval.

### ***Agricultural Trade Slows in 1983***

The Philippines' 1983 trade performance was accentuated by the disruption of imports in the final quarter of 1983. However, the agricultural export sector fared reasonably well considering the drought, low commodity prices, and rising domestic demand. Coconut products, again the leading earner, were valued at \$450 million. Products exported include 1 million tons of coconut oil; 80,150 tons of dessicated coconut; 12,300 tons of copra; and 616,800 tons of copra meal. Sugar product exports fell 10 percent to earn \$400 million, as volumes dropped 5 percent to 1.2 million tons. The long-term sugar contracts, which have averaged 23.5 cents a pound, expire at the end of 1984. But the Philippines will still enjoy the 13.5-percent share of the U.S. sugar quota, currently earning 22.5 cents a pound. Pineapple products fell 12 percent to \$91.4 million, and banana earnings dropped 32 percent to \$99.6 million (down 34 percent to 927,700 tons).

Agricultural imports, accounting for about 10 percent of all imports, fell about 10 percent. The decline is mainly due to the financial crisis. The lapse of dairy product imports, largely milk, is nutritionally disturbing, owing to only 4-percent self-sufficiency. Wheat imports, supplied entirely by the United States, were down 7.5 percent in volume to 848,600 tons. Although livestock demand has kept upward pressure on feedgrain imports

in the last several years, the drought accelerated imports. Domestic production can usually fulfill 85 percent of the country's needs. The United States provided the lion's share with 286,025 tons, and Thailand sent 178,400 tons from its drought-reduced crop. Soybean meal imports dropped modestly, with the United States supplying 12 percent of the Philippine market. The Bantangas soybean facility crushed 30,600 tons in 1983, but because of financial problems, it remains uncertain when it will move into full operation. Cotton use was up, pushing U.S. cotton exports to 18,000 tons (from 13,400 tons in 1982). Following efforts to eliminate smuggling of cheaper garments, the rise in domestic demand provided much of the impetus.

The provision of U.S. credit programs, GSM-102 and GSM-5, are playing an important role in financing the imports of several vital commodities. The guarantees cover 98 percent of the product value, may be financed over 3 years, and must be used by September 30, 1984. The program tentatively covers U.S. wheat, cotton, soybean meal, feedgrains, barley malt, meat and bone meal, breeding stock, hops extract, dry beans, and seeds (largely vegetable). During 1983, these U.S. programs were used to buy \$38.7 million of U.S. wheat and corn and will help sustain U.S. farm exports in FY 84 near \$250 million (\$300 million in FY 83).

### ***Economic Stagnation Likely in 1984***

Despite a return to normal weather throughout most of the Philippines, agricultural output may be hindered by insufficient supplies of imported inputs, such as fertilizer, seeds, and insecticides. Rice output is forecast to reach 5.0 million tons, with sufficient carryover stocks to meet domestic food needs of nearly 5.4 million tons. Rice exports, totaling 40,281 tons in 1983, will likely be suspended in 1984. Some improvement in 1983/84 corn production is expected, yet curbed imports will likely tighten supplies. Cattle, chicken, and hog numbers are expected to fall 10 to 15 percent as shortages and rising costs of feed, vaccines, and breeding stock compel cutbacks. The eroding consumer purchasing power is also depressing demand for livestock products. With steady rainfall, coconut and sugar production will begin returning to normal in the second half of 1984, although sugar yields may be lower because of less fertilizer use.

The outlook for the overall economy in 1984 suggests zero to negative growth as inflation spirals around 35 percent. The ongoing negotiations with the International Monetary Fund (IMF) are pivotal to the Philippines' short- and medium-term financial stability. Although the pending \$650-million IMF standby loan is important, the policy measures and program targets settled between the IMF and the Philippines is tantamount to renewing foreign bankers confidence. In March 1984, the 350 creditor banks approved a third moratorium on the principal payments of the Philippine foreign debt; however, the banks are delaying the restructuring of Philippine debt until the IMF program is in place. According to Central Bank estimates, the Philippines needs \$3.3 billion of new funds by the end of 1984, \$1.65 billion from multi/bilateral sources, and \$1.65 billion from commercial sources. The timing of the negotiations will decisively shape the course of 1984 for the Philippines. [Leslie E. Ross, (202) 447-8230]



## SINGAPORE

### *Economic Performance Improves*

Recovering from constraining effects of the world economic recession, Singapore's real GDP rose 7.2 percent in 1983 (6.3 percent in 1982). Per capita nominal GDP increased to about \$5,840, by far the highest in Southeast Asia. Inflation was checked to 1.1 percent, sharply down from 3.9 percent in 1982. The 1983 GDP growth was largely due to greater exports to the United States and other industrialized countries, massive Government expenditures on domestic infrastructure, and the expansion of public and private construction.

Manufacturing output (a fourth of GDP) rebounded after midyear in response to export demand (table 14). In the public and private sectors, construction (about 10 percent of GDP) continued strong and remained a major component of economic growth, despite weaker real estate sales and rental markets. Financial and business services (a fifth of GDP) continued rapid growth, while the transport and communications sector slowed. Since 1960, the shares of both manufacturing and financial and business services in GNP have about doubled, while trade's share has almost been halved.

Improved world demand for Singapore exports narrowed the country's traditional trade and current account deficits. The current account deficit diminished to an estimated \$1.1 billion from \$1.3 billion in 1982. Still, the deficit was again more than offset by large surpluses in the investment capital and services accounts. On January 1, 1984, Singapore's foreign exchange reserves totaled an estimated \$9.2 billion compared with \$8.7 billion a year earlier.

The American Embassy recently reported survey results that revealed cumulative investment in Singapore by U.S. firms totaled \$4.2 billion in 1982, 46 percent more than in 1980. Reasons for the continuing strength of U.S. and foreign investment in Singapore include (1) political stability, (2) a modern and efficient infrastructure, (3) a low rate of labor-related work stoppages, and (4) a host of Government tax incentives to achieve and maintain export competitiveness in targeted highly capital and technology-intensive industries.

### *Reliance on Trade Necessary*

The well-managed city state of Singapore, with extremely limited natural resources and an increasingly important export-oriented manufacturing sector, is vitally dependent on trade. Situated at the crossroads of international shipping and air routes in Southeast Asia, Singapore serves as a center for transportation and communications. Its principal economic roles in Southeast Asia include (1) processing, packing, and marketing the region's raw materials such as rubber, palm oil, timber, coffee, spices, and copra; (2) distributing within the region the manufactured products of industrialized countries; and (3) conducting trade-related activities such as banking, shipping, insurance, and storage. Previously, up to two-thirds of Singapore's total trade had consisted of transshipping, but its relative importance has declined, reflecting the shifts toward importing capital goods and materials for industry and exporting locally manufactured products.

**Table 14.—Singapore: Annual growth in real output by major sectors of the economy**

Sector	1982	1983
	Percent	
Manufacturing	-5.6	.6
Trade	4.7	4.3
Transport and communication	10.8	7.4
Financial and business service	14.4	15.8
Construction	36.2	27.5

Source: Government of Singapore

### *United States Becomes Singapore's Top Trading Partner in 1983*

In 1983, the United States overtook Japan, the traditional leader, and Malaysia to become Singapore's top trading partner. Total trade between Singapore and the United States increased 30 percent to \$8.5 billion. Trade with Malaysia totaled \$8.4 billion, and with Japan, \$7.5 billion. The total volume with the United States accounted for 16 percent of Singapore's global trade. The United States became Singapore's largest export market, absorbing 18 percent of its total exports.

U.S. agricultural products face a highly competitive and diversified market in Singapore, essentially a duty-free port without trade restrictions. Total U.S. shipments of farm products to Singapore amounted to \$153 million, down 3 percent from 1982. Leading items were fruits and preparations (\$33.4 million), poultry meat (\$26.8 million), sugar and tropical products (\$16.8 million), barley (\$25.1 million), and vegetables and preparations (\$11.2 million). U.S. agricultural imports from Singapore (mostly transshipments) totaled \$103 million, with the major commodities being crude rubber and allied gums (\$40.4 million), feathers and down (\$7.6 million), and cocoa and products (\$40.6 million).

### *Economic Growth To Accelerate Further*

Singapore's economic growth could accelerate to 8 to 9 percent during 1984, assuming improved economic performance by major trading partner countries. Growth of such a magnitude would place the economy back within the Government's targeted 8- to 10-percent range for annual real growth during the 1980's. During 1970-81, Singapore accomplished impressive annual average growth above 9 percent.

Economic sectors seemingly destined for higher growth in 1984 include trade, manufacturing (electronics especially), transport and communications, financial and business services, and construction. Despite the relatively weak real estate market, several major private construction projects are progressing in addition to the expensive Government mass rapid-transit system. Oil refining, shipbuilding, ship repair, and oil rig building will continue as economic problem areas through 1984. [J. Albert Evans, (202) 447-8229]

## THAILAND

### *Sound Economic Recovery Underway*

During 1983, the Thai economy began a sound recovery arising partly from the gradual revival of foreign



demand, yet more importantly, and in contrast to previous recoveries, from strong domestic demand. The GNP increased 6.2 percent, following 4.2 percent in 1982, with per capita income (current prices) growing 6.5 percent to \$790. Underlying the expansion of the agricultural and nonagricultural sectors was the generally improved commodity prices (but still low) and weather, the low inflation rate, and the stable costs of production. Although Thailand's debt-service ratio (money paid to service foreign debt relative to the value of Thailand's exports of goods and services) rose to 19.5 percent (from 16.7 percent in 1982) and the balance of payments reversed from the \$144-million surplus in 1982 to a \$786-million deficit, several factors limit the concern. These include positive growth in revenues and international reserves, cutbacks in government spending, and reduced foreign borrowing.

The 1983 trade balance deteriorated from 1982, culminating in an overall merchandise trade deficit of \$3.9 billion. The downturn in export earnings follows the drought- and price-induced drop in 1982/83 agricultural output and the weak recovery of many of Thailand's trading partners. The surge in imports, particularly in the second half of 1983, stemmed from increased consumer demand for a wide range of goods, such as dairy products, electrical appliances, and leather products. Agricultural trade recorded a \$3.3-billion surplus, with exports amounting to \$3.9 billion and imports about \$610 million.

In the nonagricultural sector, areas of growth included construction, public utilities, tourism, private capital inflows, and remittances from overseas employment. The private sector was responsible for most of the growth in construction because government spending was cut back to address the widening current account deficit. Declining interest rates and prices of imported inputs, lower electricity rates, and steady oil prices helped stabilize the costs of production, encourage business expansion, and maintain a low 3.9-percent rate of inflation (from 5.3 percent in 1982). The mining sector continued its 3-year decline, largely because of the restrictive world tin quota and large Thai inventories, but also because of low world prices for Thailand's mineral ores, such as tungsten, fluorite, and barite.

### **Agricultural Sector Output Up**

Agriculture's contribution to GDP continued declining in 1983 to 22 percent, yet the sector itself grew 2.7 percent above 1982. In recent years, agricultural productivity has slowed from the 5-percent annual average posted over the last 20 years because of some area expansion into marginal land, and poor weather and soil management. And much of Thailand's earlier growth was due to its transition from subsistence rice farming to producing a diversity of export-oriented crops. This transition was supported by strides in irrigation, available credit, cultivated area, and promotion packages successfully attuned to world demand.

The growth registered in the 1983/84 agricultural season is still considered impressive by world standards and is attributed to a return to normal weather, reduced fertilizer prices, a low rate of inflation, and some improvement in prices. Farmer's real incomes likely benefited from these conditions as well. The crop response was

varied, with production gains in rice, corn, cassava, cotton, rubber, fisheries, livestock, peanuts, coconuts, tobacco, coffee, and soybeans, and production setbacks in sugarcane/molasses, forestry, kenaf, sorghum, mungbeans, and onions (table 15).

**Table 15.—Thailand: Production of selected agricultural commodities**

Commodity	1982	1983	1984	Share of total production <sup>1</sup>
Rice	11,139	11,880	11,715	39.8
Cassava	14,500	16,500	16,000	23.4
Rubber	530	580	580	9.2
Sugarcane	30,200	23,900	19,316	6.8
Corn	3,450	4,000	4,200	8.4
Tobacco	86	93	93	3.8
Total				91.4

<sup>1</sup>See explanatory note following the table of contents.

SOURCE: Govt. of Thailand, FAS; ERS estimates.

Compared with the late and sporadic 1982 monsoon, the 1983 monsoon was delayed 1 month but was abundant, particularly in the northeastern region. The heavy rainfall and high tides in late October, which caused severe flooding in Bangkok, proved beneficial to the main rice (November-February harvested) crop. Yields were further enhanced by greater fertilizer application, which lower fertilizer prices encouraged.

The steady expansion of area devoted to corn, and the increasing use of better seeds positively influenced 1983/84 corn output; yet, output is still below the 1981/82 record of 4.35 million tons. Delays in planting the first corn crop also resulted in a late-planted second corn crop. Consequently, sorghum area was reduced nearly 14 percent to 190,000 hectares. Sorghum output declined to 300,000 tons. Average monthly prices throughout 1983 favored corn (over sorghum), which benefited from reduced U.S. corn supplies because of the PIK program and drought.

Record cassava root production was achieved in 1983 because of relatively favorable farmgate prices. Production of cassava chips, pellets, and flour—largely destined for the European market—reached nearly 8.0 million tons. Thai production is closely tied to EEC feed grain demand and support prices, which induce EEC feed compounders to supplement protein meal with the relatively cheaper cassava pellets rather than use EEC-grown feedgrains. By comparison, in mid-1983, EEC barley cost \$224 a ton, while the Rotterdam price for cassava was \$184 a ton, U.S. corn gluten feed pellets cost \$175 a ton, and soybean meal was \$222 a ton.

Although domestic prices for sugarcane have been relatively stable since 1980, the limited export market and relatively better prospects for other crops led farmers to shift cultivation from sugarcane to corn, pulses, cassava, and watermelon. Cane production in 1983 fell below the 1982 record 21 percent (to 23.9 million tons), representing a 17-percent decline (to 2.3 million tons) in raw sugar output. In recent years, domestic sugar and molasses use has hovered near 12 kgs. per person, (equivalent to total consumption of roughly 600,000 tons in 1983/84). Molasses production has followed the downturn of sugarcane, by declining to 1.3 million tons in



1982/83 (from 1.7 million tons in 1981/82); yet, with production still outpacing local use and export demand, stocks are rising.

While cotton plantings are below the 1979-81 average, stronger farmgate prices, greater use of inputs, and generally good rainfall benefited the 1983 harvest. Area harvested and production rose (previous year in parentheses) to 115,000 (110,000) hectares and 42,000 (40,650) tons. Area expansion was limited partly by the relative price strength of corn during 1983, which favored planting a second corn crop.

Other important crops in Thailand include rubber, tobacco, pulses, coffee, and kenaf. Area expansion and improving yields of rubber resulted in record output, which unlike tobacco, saw output climb because of area expansion, but saw yields fall because of crowded plant conditions. Production of pulses, which are principally black matpe and mungbeans, remained unchanged from 1982. Attractive farmgate prices and moderate input prices stimulated the 17-percent jump in coffee output to 19,500 tons in 1983.

Livestock numbers are estimated to have increased during 1983, because of adequate feed supplies, improving production techniques, and Government incentives to upgrade dairy herds. Small producers characterize the Thai livestock industry except in poultry. Perhaps partly in response to higher feed costs (particularly fish meal), meat production similarly expanded to 400,000 tons of pork, 450,000 tons of poultry and duck meat, and 155,000 tons of beef. Dairy cattle numbered about 50,000 head and fulfilled 10 to 12 percent of Thai dairy needs. About 350,000 tons (milk equivalent) of dairy products was imported during 1983. Wholesale prices for livestock products were mixed: Beef, butter, and milk were unchanged; pork and chicken were up; and eggs were down.

Consumption of fish increased because prices, although rising, were still well below meat prices. During 1983, expenditures for fish rose 6.8 percent to account for over 7 percent of the household budget, while the share of meat dropped to under 5 percent.

All types of feed were more costly in 1983. Competition between millers and exporters, for corn held up corn prices which, combined with slack poultry exports, lowered corn use (to 1.1 million tons). Soybean meal prices (largely imported) rose 18 percent, broken rice was up over 6 percent, and broiler and layer rations were 3 to 6 percent more expensive than in 1982.

### ***Policy Changes Designed To Spur Agricultural Exports***

Several agricultural policy changes occurred during 1983 that aimed to bolster Government revenues, liberalize trade, and reform the business tax structure. The Government's 1983/84 rice policy included freezing the official price support for 5-percent unmilled rice (at \$149/ton), reducing the rice export premium 50 percent for several grades of rice, and completely eliminating the premium for others. The rice policy changes became effective October 1, 1983, and will be reviewed in June 1984. The export premium (tax) is designed to ensure domestic supply and price stability and to earn revenue

for the government, yet its effect is to lower the farmgate price for rice. The cut in the export premium was mainly designed to improve farmer's incomes.

In January 1984, a rice purchase plan was approved that extends low-interest Government loans to Thai rice exporters. The loans are intended to enable the exporters to buy unmilled rice directly from the local market rather than from middlemen, and in that way, directly relate the support price to the export market. This function was previously carried out by the Government's Marketing Organization for Farmers and the Public Warehouse Organization. Also, exporters are now required to hold minimum stocks (2,000 tons per exporter between January-March). The rice export license requirements have been tightened to combat the problem of exporters not fulfilling their licensing agreements.

In April 1983, the EEC-Thailand agreement concluded that total cassava exports are not to exceed 5.0 million tons for 1983 and 1984, with a 10-percent increase that may be used in either one year or split between the two. The export ceiling is lowered to 4.5 million tons in 1985 and 1986, with the same 10-percent increase provision. To minimize the chaotic competition among exporters (as characterized the 1982/83 season), the Government recently divided the shipping season into seven periods, and has required minimum stocks level to be maintained at designated warehouses. Prior to the beginning of each shipping period, the stocks must be at least 1.4 times the contracted export volume.

In response to the depressed world and domestic sugar prices, the Government waived the subsidized cane price for a revenue sharing system. The new system relies on a 70/30 (producer/miller) base or support-price sharing formula, a base cane price that adjusts annually with world trends, while providing an initial ex-mill price guarantee to the producer, and an average-season price (determined in September) that both adjusts the base price and determines whether supplemental payments are owed to producers or to millers. Millers are paid in millgate price discounts applied to the producers' base price offered during the subsequent season. Producers receive a payment early in the sugar season. The base price for the 1982/83 season was 350 baht per ton (about 7.7 cents a pound), with long-term sugar contracts (contingent on the International Sugar Agreement [ISA] quota) possibly pushing the 1983/84 season base price to 450 baht per ton (about 10 cent a pound or \$20 a ton).

Other policy changes include liberalizing exports of coconut and rice bran meal, animal feed, jute, orchids, and beans; reforming the business taxes assessed on production of raw materials and semifinished products to avoid double taxation; redelegating customs valuation decisions away from policy-level officials; discouraging long-term corn contracts; and expanding of the ASEAN Preferential Trading Arrangement.

### ***Record Agricultural Trade Surplus in 1983***

In general, Thailand's major agricultural exports continued to endure depressed commodity prices, stemming in part from slow economic recovery in several trading partners. For several items, Thailand could not offset low prices with more shipments, not only because

demand was slack but because the drought-reduced harvests of 1982/83 diminished supplies (table 16). Rice, sugar, and tobacco faced lower prices in 1983, and sugar witnessed a notable drop in export demand. Sugar export earnings were \$275 million, down 51 percent from 1982. After the U.S. quota was imposed in June 1982, Thailand's share of the U.S. market dropped from 361,400 tons in 1981/82 (September/August) to only 15,300 tons in 1982/83. Inability to secure alternative markets has led to a substantial shift from sugar cultivation. Price undercutting among rice traders cost an estimated \$250 million in foregone earnings, despite record export shipments of 3.7 million tons. The value of rice exports fell 2.5 percent to \$930.8 million and remained the country's leading export. At the onset of 1983, corn supplies were shortened by the poor 1982 monsoon, which cut January-September exports 30 percent. As the more promising 1983 crop began to be harvested in October, exports were nearly one-third above 1982. Exports of cassava products, the second largest earner of foreign exchange, declined 16 and 27 percent to \$655 million and 5.5 million tons, respectively. However, increased cassava flour exports buffered the impact somewhat. Rubber and prawns increased, primarily because of better prices and larger volumes. Overall agricultural exports totaled \$3.9 billion in 1983.

Agricultural imports reversed a 3-year downtrend and rose 13 percent to \$610 million, mainly because of economic recovery and stockbuilding in the manufacturing sector. Thailand's imports of cotton, wheat, tobacco, soybean meal, powdered milk, sweetened forage, breeder chicks, and beverage concentrates are destined for further processing in the textile, livestock, dairy, and bottling sectors. As mentioned earlier, this growth is noteworthy because, while export demand is an important stimulus

**Table 16.—Agricultural exports of Thailand 1982 and 1983<sup>1</sup>**

	Volume		Value	
	1982	1983	1982	1983
	1,000 tons		Million dollars	
Rice (milled)	3,620	3,700	954	931
Cassava products	7,815	5,500	862	655
Sugar (raw equiv.)	2,206	1,670	565	275
Natural rubber	544	558	414	430
Corn	2,801	2,510	359	345
Meat & fish preparations	NA	NA	150	357
Fishery products	135	145	285	320
Fruit & vegetable preparations	NA	NA	111	124
Tobacco	38	28	111	89
Pineapple products	156	160	91	93
Mung & black matpe beans	190	175	84	72
Poultry—fresh, chilled or frozen	33	23	57	41
Sorghum	289	255	40	
Molasses	927	950	37	43
Fruit—fresh, dried or frozen	71	75	29	31
Orchids	6	8	15	16
Other	NA	NA	266	78
Total	NA	NA	4,439	3,900

NA=Not available.

<sup>1</sup>Estimates and preliminary data exchange rate used = 23 baht/dollar.

Sources: 1982 Foreign Trade Statistics of Thailand; 1983 ERS estimates.

(particularly for textiles), this year's strength is welling mainly from the local market.

The United States remained the largest provider of Thai agricultural imports, despite falling off 6 percent to \$150.9 million. Much of this decline is due to the 65-percent decline in Thai import demand for tobacco, which had adequate stocks from 1982 imports and larger domestic supplies. Exports of U.S. wheat and cotton grew to (previous year in parentheses) 131,800 tons (84,700 tons) and 45,600 tons (39,072 tons). These commodities accounted for three-quarters of U.S. agricultural exports to Thailand, and are likely to grow in FY 84 as total U.S. farm exports may again reach \$150 million.

### **Further Economic Growth Expected in 1984**

During 1984, greater supplies of rice, feed grains, pineapples, and several other commodities will be available for

**Table 17.—Vietnam, Kampuchea, and Laos: Rice supply and distribution, 1975-1983<sup>1</sup>**

Country/ Year	Prod.	Import <sup>2</sup>	Export <sup>2</sup>	Apparent con- sumption
1,000 tons				
Vietnam				
1975/76	6,850	805	2	7,653
1976/77	7,849	265	6	8,108
1977/78	7,075	150	5	7,220
1978/79	6,526	250	—	6,776
1979/80	6,993	135	—	7,128
1980/81	7,591	140	5	7,726
1981/82	8,170	95	15	8,250
1982/83	8,957	30	140	8,847
1983/84	9,100	6	250	8,856
Kampuchea				
1975/76	900	—	—	900
1976/77	1,080	—	20	1,060
1977/78	1,080	—	19	1,061
1978/79	900	200	—	1,100
1979/80	339	317	—	656
1980/81	996	122	—	1,118
1981/82	980	70	—	1,050
1982/83	1,263	25	—	1,288
1983/84	1,213	20	—	1,233
Laos				
1975/76	575	120	—	695
1976/77	558	100	—	658
1977/78	553	94	—	647
1978/79	517	70	—	587
1979/80	564	53	—	617
1980/81	684	50	—	734
1981/82	750	20	—	770
1982/83	651	40	—	691
1983/84	599	60	—	659
Total				
1975/76	8,325	925	2	9,248
1976/77	9,487	365	26	9,826
1977/78	8,708	244	24	8,928
1978/79	7,943	520	—	8,463
1979/80	7,896	505	—	8,401
1980/81	9,271	312	5	9,578
1981/82	9,900	185	15	10,070
1982/83	10,871	95	140	10,826
1983/84	10,912	86	250	10,748

<sup>1</sup>Stock data unavailable. <sup>2</sup>Trade data on calendar year basis (for example, 1975/76 = calendar 1976).

Sources: FAO, Foreign Agricultural Service.



export. However, except for corn and rubber, prices have not improved over 1983. Current estimates anticipated rice and corn exports to match 1983's, and pineapple product exports to expand in the Asian and Middle Eastern markets. Cassava pellet exports will likely be curtailed by the EEC quota and some price-induced substitution of wheat for feed grains. Although sugar production is falling, exports may grow to 1.4 million tons. Thailand surpassed its allotted 1982 and 1983 sugar export quota, as agreed to in the ISA, and therefore Thailand's 1984 quota is under reconsideration by the ISA. The ISA decision may influence not only 1984 exports but also Thailand's participation in the next ISA (current ISA expires December 31, 1984.)

Continued economic recovery is expected in 1984, with real GDP growth between 6.2 and 6.5 percent. The trade gap should narrow as imports taper, and exports gain in volume, if not in price. Without substantial improvements in prices and yields, agricultural productivity is likely to be near 3.0 percent, rather than approach the 1982-86 plan target of 4.5 percent. [Leslie E. Ross, (202) 447-8230]

## CENTRALLY PLANNED SOUTHEAST ASIA

Currently, the estimate of total 1983 rice output for Vietnam, Kampuchea, and Laos is 10.9 million tons, the same as in 1982. Vietnam's 1983 crop was up only 2 percent, while the rice harvests in Kampuchea and Laos

were down 4 and 6 percent, respectively. Rice imports for the region, mainly by Laos, are estimated to total 86,000 tons, down 9 percent from last year. Vietnam is expected to export 250,000 tons of rice. Apparent rice consumption for the region in 1983/84 (October/September) is estimated at 10.7 million tons, a little less than in 1982/83.

## Vietnam

Vietnam's 1983 rice harvest is estimated at a third successive record of 9.1 million tons, up 2 percent over 1982 (table 17). It is thought that typhoon and flood damage to rice in some localities in 1983 was offset by good harvests in unaffected or less-damaged areas. Official reports attribute increased production of foodgrain in 1983 to "tangible progress in intensive cultivation with the application of scientific and technological advances." Vietnam now claims no need to import food and looks to the prospect of building food grain reserves.

According to figures released in late 1983 by the general statistics department, Vietnam's livestock herd now includes 2.2 million cattle, 2.5 water buffaloes, and 11.2 million hogs. Increases for 1983 compared with 1982 were cattle, up 11.6 percent; water buffalo, up 2.2 percent; and hogs, up 3 percent. The 1983 poultry flock was estimated at 8.2 million birds, up 6.2 percent from 1982. [William Hall, (202) 447-8860]

---

# Malaysia's Production and Exports of Palm Oil

Gary Ender

927000

International Economics Division  
Economic Research Service

**Abstract:** Malaysia is the world's largest producer and exporter of palm oil. During 1970-83, production and exports each grew over 15 percent per year. Palm oil is a profitable, high-yielding crop, and Malaysia provides an agriculturally and economically favorable environment. Crude palm oil exports grew until 1975; nearly all palm oil exports now are refined and/or fractionated. Continued increases in area and higher yields because of cloning will assure that palm oil competes strongly with other vegetable oils for the rest of this century. Production may reach 4.3 million tons in 1985 and 6.0 million tons in 1990; corresponding exports would be 3.5 million tons in 1985 and 4.6 million tons in 1990.

**Keywords:** Malaysia, palm oil, production, exports, Cameroon weevil, cloning, forecast, area, yield, marketing, estates, FELDA.

Malaysia has been the world's largest producer of palm oil since 1972 and the largest exporter of palm oil products since 1965. In 1983, a poor year for production in Malaysia, it produced 55 percent of the world's palm oil and supplied more than 70 percent of the world's exports of palm oil products. During 1970-83, production and exports each grew at average rates over 15 percent per year (table 18).

Malaysian palm oil will continue to compete strongly with other vegetable oils for the rest of this century. It is a high-yielding crop grown in a very suitable environment and in a developing country with particularly good transportation and communications facilities. In Malaysia palm oil is produced by a well-organized industry, which can draw on expertise developed over more than half a century in its private (estate) sector. Since the

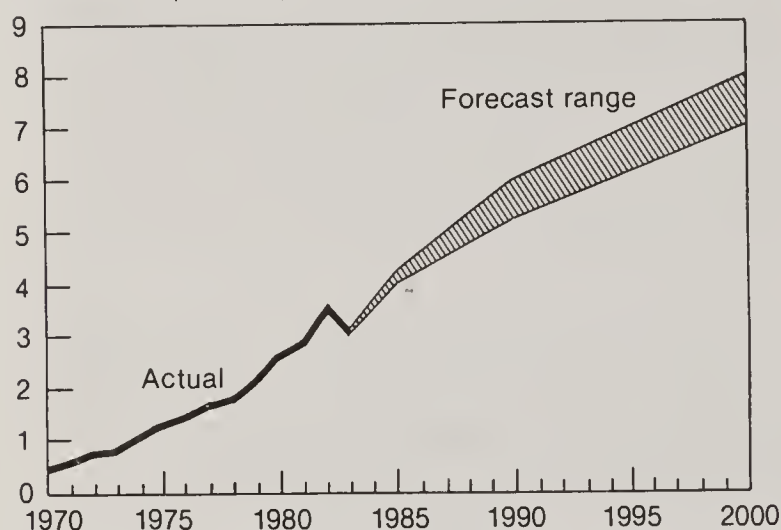
**Table 18.—Production and exports of palm oil in Malaysia and the world**

	1970	1975	1980	1981	1982	1983
1,000 tons						
Production						
World	1,687	2,943	4,759	5,091	5,883	5,489
Malaysia	431	1,258	2,576	2,824	3,512	3,018
Percent	(26)	(43)	(54)	(55)	(60)	(55)
Exports						
World	902	1,935	3,687	3,310	3,766	4,008
Malaysia	402	1,160	2,284	2,486	2,799	2,894
Percent	(45)	(60)	(62)	(75)	(74)	(72)
Percent of Malaysian production exported	(93)	(92)	(89)	(88)	(80)	(96)

Sources: Government of Malaysia, USDA estimates.

### Palm Oil Production in Malaysia

Metric tons (millions)



USDA

early 1960's, the Government has strongly supported smallholder production as well. In the 1970's, it began to encourage investment in refineries to increase employment and value added. Crude palm oil exports peaked in 1975, and virtually all exports are now processed palm oil. In the next 10 years, area, yield, production, and exports will continue to increase at substantial rates, although slower than in the past. Production may reach 4.3 million tons in 1985 and 6.0 million tons in 1990. Corresponding exports would be 3.5 million tons in 1985 and 4.6 million tons in 1990.

### Production

The rapid growth of palm oil production in Malaysia is primarily the result of substantial growth in area. The yield of fresh fruit bunches and the oil extraction rate also increased; new varieties were higher yielding and reached their peak yield sooner (table 19). The high profitability of oil palm, coupled with the declining profitability of rubber because of falling prices, encouraged both new planting of oil palm and replanting of rubber area with oil palm. In 1982, production of palm oil reached 3.5 million tons; in 1983 dry weather and other factors caused production to fall to 3.0 million tons.

### Estates and Smallholders

In Malaysia, palm oil has traditionally been produced on estates. The harvested fresh fruit bunches require rapid processing if the quality of the extracted oil is to be high. Thus, each plantation must have its own mill or be near one, and it is efficient to have a large amount of production in one place. Economies of transport are also possible with light railroads or other systems.

Since the 1960's the Government has encouraged smallholder production. The Federal Land Development Authority (FELDA) and other schemes attempt to organize the smallholders into efficient production units with their own mills.<sup>1</sup> The transfer of technology and ownership to the smallholders have been almost turnkey operations, and the Government has borne substantial costs. Even though yields are lower in these schemes than on the estates, tables 20 and 21 show that area and production have been overtaking those in estates.

**Table 19.—Malaysian palm oil: Annual growth rates**

	1970-80
	Percent
Total area	13.0
Yield of 10-year-old palm	0.3
Extraction rate	1.7
Palm oil production	18.4

Sources: Calculated from Government of Malaysia data and ERS estimates.

### Area

Although the first oil palms were planted in Malaysia in 1917, by 1950 there were still less than 50,000 hectares planted. In the late 1950's and early 1960's, the new Tenera (DxP) varieties were introduced. Area expanded rapidly starting in the mid-1960's, as the increased yields and extraction rates of these new plants became known.

<sup>1</sup>Other schemes are under FELCRA (Federal Land Consolidation and Rehabilitation Authority), RISDA (Rubber Industry Smallholder Development Authority), and the states.



During 1965-80, total oil palm area in private estates in West Malaysia grew at an average of over 12 percent per year, in the government schemes and smallholdings in West Malaysia, at over 24 percent per year, and in East Malaysia, at over 15 percent per year. Total area increased from about 110,000 hectares in 1965 to about 1.1 million hectares in 1982.

**Table 20.—Malaysia: Production of crude palm oil<sup>1</sup>**

	1970	1975	1980	1985	1990
	<i>1,000 tons</i>				
West Malaysia	402	1,137	2,397	4,000	4,800
Estates <sup>1</sup>	361	885	1,575	2,100	2,250
Schemes <sup>1</sup>	41	252	822	1,900	2,550
East Malaysia	29	121	179	300	400
Total <sup>2</sup>	431	1,258	2,576	4,300	5,200

<sup>1</sup>1970-80 data are actual, except estates and schemes subtotals, which are estimated. <sup>2</sup>1985-90 forecasts shown are based on detailed official data for years through 1980; the effects of the Cameroon weevil are not included. Taking all relevant factors into account leads to production forecasts of 4.0 to 4.3 million tons in 1985 and 5.2 to 6.0 million tons in 1990.

Sources: Government of Malaysia, ERS estimates.

**Table 21.—Malaysia: Total area under oil palm<sup>1</sup>**

	1970	1975	1980	1985	1990
	<i>1,000 hectares</i>				
West Malaysia	270	573	901	1,160	1,280
Estates	194	355	495	580	620
Schemes <sup>1</sup>	76	218	406	580	660
East Malaysia	39	73	117	170	210
Total	309	646	1,018	1,330	1,490

<sup>1</sup>1970-80 data are actual; data for schemes have been adjusted slightly for inconsistencies in the official data. 1985-90 figures correspond to production forecasts in table 3.

Sources: Government of Malaysia, ERS estimates.

Oil palms continue to grow throughout their economic life, and harvesting cost increases with height. Moreover yield decreases slowly after reaching a peak at about 8-10 years of age. At a certain age, therefore, replanting becomes more profitable. This is especially true if new higher- and earlier-yielding varieties are available. On West Malaysian estates, replanting began after World War II. Since then, the age at which trees are replanted has decreased from about 30-35 years to about 20-25 years. In government schemes and in the East Malaysian state of Sabah, where oil palm cultivation began later, replanting is only now becoming a necessity.

## Yield

The most dramatic improvements to date in genetic yield potential occurred with trees planted in the late 1950's and early 1960's.<sup>2</sup> Table 22 shows when and to what extent these increases in yield were realized. The rapid

<sup>2</sup>The shift was from the Deli (DxD) varieties to the Pisifera (DxT) and then rapidly to the Tenera (DxP).

rise in the yield of 5-year-old palms between 1950 and 1960 reflects a substantial change in the yield profile. Not only did the new varieties produce more fresh fruit per hectare, both their peak year and their first harvest were earlier. Thus from 1950 to 1960, yields of trees 3 through 8 years old each increased more than 25 percent.

**Table 22.—Change in yield of oil palm fresh fruit bunches by age of tree: West Malaysian estates**

Age	1950-60	1960-70	1970-80
	<i>Percent</i>		
5	29	15	4
10	19	9	3
15	3	10	7
20	5	6	19

Source: ERS estimates.

The new varieties were also planted in smallholder schemes supported by the Government, most of which are in West Malaysia under FELDA. Analysis of the available official data shows, however, that their productivity is much below that of the private estates. Even by 1980, the West Malaysian schemes harvested about 10 percent less of their harvestable area than the estates, where a small percentage also goes unharvested. In addition, trees seem to mature (become harvestable) somewhat later. Moreover, the trees harvested on the schemes produced only about 92 percent as much as those on the estates in 1980. This last difference may be largely due to differences in soil type; the estates, being older, are generally located on the most suitable soils and terrain. Overall, in West Malaysia, the schemes produced only about 70 percent as much fresh fruit tonnage per hectare as the estates from trees 3 years or older. Yields were lower in the estates and schemes of East Malaysia than in West Malaysia largely because of poor pollination.<sup>3</sup>

## Extraction

Initial processing of oil palm fresh fruit bunches produces palm oil, palm kernels, and waste products. Palm oil is then refined and/or fractionated into a variety of products including refined, bleached, and deodorized (RBD) palm oil, palm olein, and palm stearin. Palm kernels are crushed to produce palm kernel oil and palm kernel meal.

Because of varietal and processing improvements, the amount of palm oil extracted from a given amount of fresh fruit bunches increased 23 percent in the 1950's, 28 percent in the 1960's, and 18 percent in the 1970's. By 1980 the extraction rate had reached about 22 percent. Palm oil is recovered in a fairly constant ratio to palm kernels; in the past (1971-80) this was about 4.8.

## Production and Prices

Production of perennial crops like palm oil is generally price-inelastic; that is, if supply and demand conditions

<sup>3</sup>The data do not permit separation of the effects of different factors on yield.

cause a change in world vegetable oil prices, in the short run, production of palm oil will change little. Producers' decisions to expand area depend on their expectation of long-run profitability, which in turn depends on expected long-run prices. The short run for palm oil is thus the period needed to develop a new expectation about long-run prices, which is likely to be several years, plus about 3 years of immaturity. Because oil palms are harvested for more than 20 years, in a given year only a small part of the total area is decided, and producers are likely to ignore what they consider to be temporary price fluctuations. Moreover, because perennial crops constitute a long-term investment, reductions in fertilization or other actions that may sacrifice future yield are rarely considered.

Palm oil production's unresponsiveness can be observed in the "momentum" accumulated in the planted trees. Production can increase for several years without new planting or genetic improvements, and regardless of the price of vegetable oil outside Malaysia. This is because immature trees continue to come into production for 2 or more years and young mature trees increase in yield for several years. In the West Malaysian public schemes and in East Malaysia, most of the trees have not reached their peak yield.

Present costs of cultivating oil palms and current yields and prices result in ample profits for Malaysian growers. Because oil palms are perennials, palm oil production is not very price responsive, and as a highly profitable crop, there is substantial scope to reduce prices below those of other oils in response to competitive forces. These characteristics were evident during 1980-82, when despite the low real prices of vegetable oils in world markets, palm oil production grew.

## Exports

Because Malaysia's population is small compared with its production of palm oil, nearly all its production is available for export. In 1983, Malaysia exported 2.8 million tons of palm oil products (table 23). Palm oil's dramatic rise to importance as an export commodity is partly due to the large variety of end uses to which it is suited. The Government of Malaysia has fostered this trend by creating economic incentives to invest in refining and fractionating facilities and by supporting research on end uses. It has also joined with the private sector in developing markets and servicing users.

## End Uses

Once primarily an industrial input, palm oil is now an important edible oil as well. Crude palm oil contains a rather broad spectrum of fatty acids. Thus, it can be fractionated into more and less saturated components, which are used in shortening, vegetable ghee, margarine, and frying fats, as well as in soaps, detergents, and other industrial applications. For example, India buys both palm oil and palm olein (the less-saturated fraction) for sale as cooking oil and for use in the manufacture of vegetable ghee. While palm oil and palm olein are generally preferred by Indian consumers over other competitive imported oils for direct use in cooking, the amounts of palm oil and palm olein purchased for use in the production of vegetable ghee vary with the prices of their principal substitutes, soybean and rapeseed oils. The Soviet

**Table 23.—Malaysia: Exports of palm oil products<sup>1</sup>**

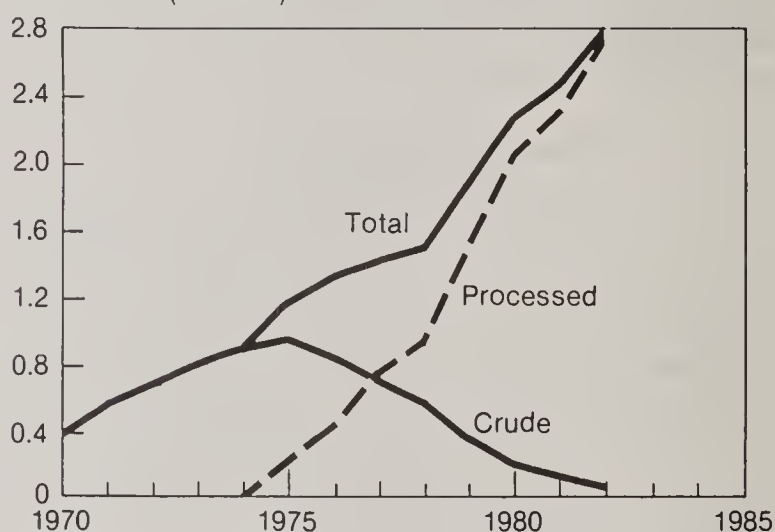
	1970	1979	1980	1981	1982
1,000 tons					
Unfractionated					
Palm oil	402	859	772	1,027	1,169
Crude <sup>1</sup>	402	358	198	139	78
Refined	0	501	574	888	1,091
Fractionated					
Palm oil	0	952	1,366	1,296	1,481
Palm olein	0	497	871	873	1,015
Palm stearin	0	455	495	423	466
Other <sup>2</sup>	0	90	146	163	149
Total	402	1,901	2,284	2,486	2,799

<sup>1</sup>CPO exports peaked at 957,000 tons in 1975. <sup>2</sup>Includes palm acid oil and palm fatty acids; 1982 palm fatty acids estimated.

Source: Government of Malaysia.

## Malaysian Exports of Palm Oil

Metric tons (millions)



USDA

Union imports Malaysian palm oil and palm stearin (the more-saturated fraction) to make margarine and other solid fats, which are traditionally preferred over liquid oils. Nigeria, also a major palm oil producer, buys palm olein to help meet domestic demand for cooking oil.

## Government Support for Processing

By 1977, processed palm oil had surpassed crude palm oil in export volume. The following year the Government of Malaysia put into effect an export tax structure that has strongly encouraged processing. Rebates on the export duty increase with the extent of processing. Investment in refineries soared, and processing capacity has exceeded production for several years. In 1982, the Government issued no new refining licenses. By 1982, crude palm oil made up only 3 percent of total palm oil exports.

## Marketing

Malaysian exporters and the Government realize that marketing Malaysia's rapidly increasing supply of palm oil is a major challenge. There is not, however, a unified marketing plan from which palm oil promoters work. Various Government agencies have become involved in



marketing activities, including official missions and trade teams (and palm oil tours for foreign delegations), technical servicing, market identification, maintenance of overseas offices, end-use research, and trade shows and exhibitions. The private sector has not spent heavily on promotion, but is typically represented on trade missions. The Government's efforts are likely to be most productive (and nonduplicative of work by the private sector) in dealing directly with governments that impede the importation of palm oil for technical or other reasons, and in product research.

Malaysia's exports of palm oil products by destination are shown in table 24. The largest importers in 1982 were India, Pakistan, the Soviet Union, the Netherlands, Japan, Nigeria, and Jordan. Malaysian palm oil was shipped to at least 61 countries in 1982. There was great diversity among the importers; developed, developing, and centrally planned countries were all well represented, and geographically the markets spanned Asia, Africa, and Europe. Malaysia has done particularly well exporting palm oil products to countries where it has the advantage of proximity. Many palm oil importing countries also have undeveloped livestock feed industries, so they do not find the meal that they would obtain from other oilseeds an advantage.

## Future Production and Exports

Palm oil products from Malaysia will continue to compete strongly with other vegetable oils in the latter half of the 1980's and in the 1990's. Production will grow at a substantial rate at least until the early 1990's. If cloned seedlings are planted widely, a round of strong yield increases could begin in the mid-1990's, just as total planted area begins to reach a plateau.

## Future Production

In August 1983, the Malaysian Minister of Primary Industries cited projections of palm oil production as high as 4.5 million tons in 1985 and 6.5 million tons in 1990. More recently an analysis by the Palm Oil Research Institute of Malaysia (PORIM) forecast 4.2 million tons in 1985 and 5.6 million tons in 1990, with production peaking at 5.7 million tons in 1992.<sup>4</sup> The PORIM model does not include the effects of the Cameroon weevil, which was introduced into Malaysia in 1981 to improve pollination and reduce the cost of manually assisted pollination.

An ERS model more detailed and more flexible than PORIM's, which also does not encompass the effects of the weevil, yields forecasts of 4.3 million tons in 1985 and 5.2 million tons in 1990. Increases in planted area, yields, and extraction rate are projected at rates that are modest compared to those of the 1970's. Area increases at a decreasing rate because available land is of increasingly marginal quality and has an ultimate limit. As smallholder area becomes a larger and larger share of the total; moreover, the cost to the Government of developing these schemes may become less acceptable. In the ERS model's results, production continues to increase in the 1990's and reaches 5.5 million tons in 2000.<sup>5</sup> A further calculation with this model shows that, if after 1980 there were no new plantings, no increases

<sup>4</sup>Chow Chee Sing, 1984. "Forecast of Malaysian Palm Oil Production up to Year 2000." Palm Oil Research Institute of Malaysia. Paper presented at International Seminar on Market Development for Palm Oil Products, 23-27 January 1984, Kuala Lumpur. That production peaks seems to be due to the mathematical formulation of the forecasting model used, and not to any general assumptions of the analysis.

<sup>5</sup>No increases in yield due to cloning are included.

**Table 24.—Malaysia: Exports of palm oil products by destination<sup>1</sup>**

	Refined Palm Oil		Palm Olein		Palm Stearin	
	1981	1982	1981	1982	1981	1982
	Tons					
Australia	—	—	29,759	37,132	—	—
Germany, F.R.	—	—	—	—	23,636	17,016
India	130,841	154,789	219,708	245,631	42,875	90
Indonesia	—	—	36,669	0	—	—
Iraq	—	—	—	—	7,444	27,684
Japan	77,724	50,485	48,610	54,930	12,365	21,195
Jordan	64,098	94,050	—	—	—	—
Korea, Rep.	9,585	32,200	—	—	12,401	26,936
Kuwait	—	—	—	—	23,169	5,689
Netherlands	83,565	88,387	—	—	26,763	44,367
Nigeria	—	—	59,185	101,074	—	—
Pakistan	208,843	258,133	—	—	—	—
Singapore <sup>2</sup>	—	—	277,307	393,522	116,946	111,555
Thailand	—	—	26,642	2,407	—	—
United Kingdom	—	—	22,768	22,347	—	—
U.S.A.	56,839	51,372	20,955	16,721	27,334	28,358
U.S.S.R.	76,318	164,918	—	—	54,060	86,701
Other	180,679	196,581	132,359	141,490	75,917	96,374
Total	888,492	1,090,915	873,962	1,015,254	422,910	465,965

<sup>1</sup>CPO exports were 138,779 tons in 1981 and 78,146 in 1982; major importers in 1981 were the Netherlands (64,333 tons) and the United Kingdom (53,923 tons); 1982 exports of CPO by destination not available. <sup>2</sup>Most of Singapore's imports are reexported.

— = less than 20,000 tons in both years.

Source: Government of Malaysia.

in yields (except by aging or replanting), and no increase in extraction rate, production would still increase from 2.6 million tons in 1980 to 3.5 million tons in 1985.

The major source of uncertainty regarding projections of Malaysian palm oil production to 1990 is the Cameroon weevil. After its introduction into West Malaysia in 1981, it was credited with causing a large part of the dramatic increase in production in 1982, from 2.8 to 3.5 million tons. The weevil improved pollination, resulting in more fruit, denser fruit bunches (and some temporary problems for mills), and a lower ratio of palm oil to palm kernels (3.6 in the latter half of 1982). In 1983, however, production fell to 3.0 million tons, and many analysts have blamed the decrease on the weevil's taxing or stressful effect on the oil palms.

Due to the weevil, palm oil production in the peak months of 1982 was much higher than trend. In subsequent months, production dropped sharply, but analysis shows that the post-peak months' production was not below trend. In 1983, however, total production was down. The as yet unanswered question is, Was this due to the drought of early 1983, or the weevil, or both? In addition many growers are reported to have taken the unusual step of cutting back on fertilizer application in 1982 to improve their cash flow when prices fell. Lower nutrient availability is likely to have a lagged effect on production in the same way that moisture stress does. In the long run, however, the net effect of the Cameroon weevil on yield is likely to be positive. By raising yield and lowering per unit cost, the weevil will help palm oil to continue to compete strongly with other vegetable oils.

In the 1990's, cloning will be the major technical factor affecting production. Cloning is a process in which an exact copy of a given tree is made vegetatively, that is, without sexual reproduction. Techniques for cloning have already been developed; in the 1990's, cloned seedlings may be used in most new planting and replanting. Cloning gives the oil palm grower the chance to select only the most desirable trees. It is generally believed that the use of cloned trees will lead to about a 30-percent increase in yield.

Other factors that will influence palm oil production in Malaysia are the cost and availability of labor (particularly for harvesting) and production in other countries. Labor absorbs a large part of the cost of producing palm oil, and Malaysia's population is leaving agriculture fairly rapidly. Thus, controlling expenditures on labor is becoming a significant problem on private estates. In the Government-initiated schemes, however, settlers provide virtually all the labor, so availability and cost are not usually problems. These schemes, moreover, are likely to expand more rapidly than the private estates, as they are part of the Government's efforts to manage rural-urban migration and redistribute income. Furthermore, the Government's recently released National Agricultural Policy, which indirectly endorses palm oil production by recommending concentration in Malaysia's best crops, may require settlers to provide labor for establishment of the stand. This would help hold down any subsidy involved, another goal of the new policy.

At present there are no other countries likely to compete seriously with Malaysia as exporters of palm oil. Indonesia is the only other producer that exports a significant quantity, and it probably will not increase exports

because of growing domestic demand. Thailand, the Philippines, India, and Brazil, among others, are considering investments in oil palm, but it would be 5 to 10 years after planting before production would be high enough to affect Malaysia. None of these countries currently produces more than 20,000 tons of palm oil per year. Nor is the situation in Africa likely to change. As a group, the African producing countries are net importers now and will probably remain so over the next 10 years. A few countries, like Ivory Coast, may continue to export small amounts of crude palm oil.

The above factors should result in Malaysian palm oil production of 4.0 to 4.3 million tons in 1985 and 5.2 to 6.0 million tons in 1990; the Cameroon weevil will probably cause a small increase in yield, and by 1990 there may be some additional increase from cloning. These levels correspond to average annual growth rates of 9.0 to 10.6 percent during 1980-85 and 7.2 to 8.7 percent during 1980-90. Production is not likely to peak in the 1990's, and will reach 7 to 8 million tons by 2000.<sup>6</sup>

### **Future Exports**

Continued strong growth in palm oil production will make Malaysia's marketing task more difficult and exert downward pressure on world vegetable oil prices. Stocks may increase as a share of exports. Even if exports continue to decrease slowly as a share of production, Malaysia is likely to market 3.3 to 3.5 million tons of palm oil products in 1985 and 4.0 to 4.6 million tons in 1990. These volumes correspond to average annual growth rates of 7.5 to 8.8 percent during 1980-85 and 5.7 to 7.2 percent during 1980-90.

An important set of factors affecting Malaysia's ability to market this much palm oil is oilseed production and policy and commercial import capacity in the many developing countries that are, or will be, using a significant amount of imported palm oil. Palm oil's versatility and Malaysia's proximity to many of these markets give Malaysian palm oil an advantage over other oils. Countries like India and Pakistan will probably increase their imports of palm oil if its price falls relative to those of other oils. Large increases in total imports, however, would conflict with fairly strong oilseed production programs. Large imports by many other developing countries are precluded by their limited export earnings. Palm oil's entry into some of these markets is also limited by traditional preferences and lack of information. Such barriers will not remain long in most countries. Nevertheless the competitiveness of palm oil will depend on the ability of those marketing it to do so efficiently and effectively.

Soybeans and soybean oil will face tough competition from palm oil for the rest of this century. The profitability of palm oil is bolstered by the long experience of Malaysia's producers, the considerable experience of its refiners and exporters, and state-of-the-art research. In many markets Malaysian palm oil has an advantage because of proximity or because oilseed meal demand is minimal. In such markets P.L. 480 sales of soybean oil may be an essential market development tool. [Gary Ender, (202) 447-8229]

<sup>6</sup>Forecast based on total area of 1.65 to 1.85 million hectares, continuing benefits from the Cameroon weevil, and 5 of every 6 hectares planted with cloned palms yielding 30 percent more than indicated by conservative trend on which table 20 is based. Effects of palm oil production in other countries are not included.



# Overview of Thailand Rice Sector

927001

Leslie E. Ross

International Economics Division  
Economic Research Service

**Abstract:** Thailand is one of the world's leading producers and exporters of rice. Production averaged 2-percent annual growth during the 1970's, largely because of area expansion, and because of improved irrigation systems and introduction of higher yielding rice varieties. Even so, only one-fourth of the rice area is irrigated, about 10 percent devoted to high-yielding varieties, and under 55 kgs. of fertilizer per hectare is used on rice, leaving significant opportunity for Thailand to increase output. Yet, current Government policy seeks to maintain low prices for consumers and not encourage rice production beyond exportable levels. The share of the rice crop exported has grown from 12 percent in 1970 to over 30 percent in 1983, as Thailand's per capita consumption appears to have reached a plateau. During 1984, exports may match or exceed the 1983 record of 3.7 million tons.

**Keywords:** Thailand, rice, production, policy, exports, yield, area.

## *Rice Is Leading Crop*

Agriculture dominates Thailand's economy. It directly accounts for about one-fourth of GDP, over 60 percent of export earnings, and over half of total employment. Indirectly, when agriculturally based industries are considered, agriculture's importance to the economy magnifies. Over the last two decades, Thailand's agricultural activities have grown and diversified, yet rice remains the leading crop. As a percentage of the value of agricultural output, rice has fallen from 53 percent in 1960 to 33 percent in 1983. The switch from traditional rice farming to a more diversified agriculture geared toward export-oriented crops (such as rubber, corn, cassava, sugarcane, and pineapples) has not occurred at the expense of riceland, which occupies about 60 percent of total farmland. Instead, rice area averaged nearly 3-percent annual growth during the 1970's. Rice production grew more slowly, averaging 2 percent annually, as yields declined. The expansion into low-yielding and rainfed land offset the yield improvement stemming from expanded and rehabilitated irrigation systems.

## *Rice Expands Export Horizon*

In the last several years, rice earnings have averaged 25 percent of agricultural exports and 15 percent of total exports. Rice output has outpaced domestic consumption, with the exported share of the rice crop growing from 12 percent in 1970 to over 30 percent in 1983 (see table 25). Similarly, Thai rice has increased its share of the world rice exports from 13 to 31 percent, while the U.S. share has lessened from 22 percent to 19 percent. (See section on Thai and United States Compete.)

The taxes levied on rice (rice duty, premium, and reserve requirement) have been an important source of Government revenue. Since 1969, rice taxes have provided from 12 percent to the current 2 percent of total revenue. In

recent years, the taxes have been lowered because they depressed producer's prices and farmer's incomes. The current policy seeks to raise farmer's incomes while keeping rice prices low for consumers and not inducing rice production beyond exportable levels.

## *Low-Yielding Traditional Rice Characterize Output*

The bulk of rice production comes from the main wet-season crop, although relatively stronger growth in the second-crop yields has caused the main crop to slip under 90 percent of total output. Second-crop yields are roughly double those of the main crop, reflecting the predominance of both modern high-yielding variety (HYV) seeds and greater water control, when 77 to 98 percent of the area is under some form of irrigation. In contrast, the main crop relies largely on rain because consistently less than one-fourth is irrigated. Without greater water control, the traditional varieties are less risky and preferred over HYV rice. The relatively lower use of fertilizer during the main-crop season further indicates the farmer's efforts to minimize risk, despite equal or higher farmgate prices. From 1974 to 1982, fertilizer use in the wet season was roughly one-eighth of that applied on the secondary crop—keeping total use on rice below 55 kgs. per hectare.

Future production growth will probably rely more on yield improvement than on area expansion, because nearly all suitable land has been tapped. The Government feels greater returns will be realized from improvement of existing irrigation and water control systems than from expansion of irrigated area.

## *Policies Aimed To Support Rice*

During the 1970's, the Royal Thai Government (RTG) promoted rice production through subsidizing fertilizers,

expanding irrigation, researching and developing modern varieties, setting minimum target/support prices, and providing credit. Rice export taxes, which included a premium, duty, and reserve requirement, largely supported these programs. These taxes varied by grade and variety of rice and were adjusted, and at times lifted, to both stabilize domestic prices and maximize exports. The reserve requirement was initiated in November 1972. It required exporters to give the Government a percentage of rice from the amount exported. In November 1981, this was changed to a fixed monetary payment and in May 1982 it was abolished. The export premium and duty were revised downward as of October 1, 1983.

#### ***Policy Shortcomings; Future Policy Options***

The programs have benefited participating farmers; however, because of inadequate manpower and finances, the scope has been very limited and the overall welfare of farmers has not improved. The lack of Government and farmer storage facilities further softens the farmgate price of rice. The RTG extension of modern varieties and World Bank financed irrigation projects helped stem the tide of average declining yields during the 1970's. But yields in the 1980's could rise substantially through improved water, pest, and weed control, and through greater use of fertilizers. Production during the 1980's will depend on the extent these and other modern techniques can be economically adopted. Of further importance is the extent that policies can be altered to raise rather than depress prices. Thus, rising returns would be encouraged on investment.

#### ***Steady Domestic Price Important***

A primary Government concern is to maintain stable rice prices to benefit consumers. To do this, the Government varies the export taxes on rice. Increases in the local prices prompt the Government to raise the taxes to the point where Thai rice is not competitive for export, or when there are low prices and exportable surpluses, the taxes are lowered to stimulate exports. This policy has successfully steadied the real price of rice, despite rising real incomes. Even so, per capita consumption appears to have declined from 190 kgs. in 1970 to 165 kgs. in 1984. Rice consumed as food rose slightly from 7.1 million tons during 1970-73 to 7.6 million tons during 1980-83, keeping per capita consumption among the world's highest. Over half of Thai production of glutinous rice is domestically consumed, whereas more than 60 percent of nonglutinous rice output is usually available for export. The stronger export demand and relative price strength for nonglutinous rice encourages many farmers to select it over glutinous. Thailand is the principal trader of glutinous rice, but only about 100,000 tons is traded world-wide.

The high susceptibility of Thai rice to flooding and drought largely determines rice area, with farmgate and fertilizer prices dictating fertilizer application, and subsequent yield. During 1976-82, wholesale fertilizer prices averaged an 8-percent increase annually, resulting in fertilizer use growing only 3.6 percent. The growth in fertilizer use is based largely on the strength of the more controllable conditions surrounding the dry-season crop; thus, it encourages both modern rice varieties and fertilizer application. The Government assessment of the rice

harvest strongly influences the export policy, which is important, but secondary, to the politically powerful domestic market. In the past, unacceptably increasing rice prices have been met with demonstrations and have caused changes in Government leadership.

#### ***Export Taxes Central to Export Policy***

As mentioned earlier, the three policy instruments that have been used to guide export volumes are the export premium, duty, and reserve requirement. Dismantling these taxes in recent years is mainly intended to raise rice's farmgate price in view of record output. Even with record exports in 1983, prices were relatively low because of strides in world production and the prevailing "buyer's market" for rice. Aggressive Thai marketing includes Government-sponsored trade missions to Africa and South America, as well as rediscounting facilities that are similar to export credits.

Thailand adapts well to the export market and is a reputable supplier of high-quality rice. The presence of Government in exports varies from year to year, yet is attractive to countries that prefer government-to-government sales contracts. The sales to governments accounted for 25 to 50 percent of total exports during the 1970's and 35 to 39 percent in the 1980's. Thai exports are suited to many importers needs because the rice is bagged before shipping, and accommodates an importer's lack of bulk handling or inland transportation systems. And proximity to the Asian, Middle Eastern, and Eastern African markets provides a transportation advantage and a shortened order period.

#### ***Export Grades and Destinations Grow***

Thailand exports a variety of grades, ranging from 100-percent white rice to 25-percent broken, to glutinous and parboiled rice. White rice and parboiled rice are the predominant grades sold, with Asian markets consuming 35 percent of all exports in the last several years. The Middle East—largely Saudi Arabia, Syria, and intermittently, Iran and Iraq—have increased their purchases from 2 percent in 1970 to 19 percent in 1983. Further competition in African markets has favored Thai exporters, who have enlarged their exports to Africa from 111,000 tons in 1970 to 1.3 million tons in 1983 (table 26).

#### ***Thai and United States Compete***

When Thai export markets are compared with U.S. rice export destinations, some overlapping and substitution of markets is apparent. For example, U.S. rice exports accounted for 59 percent or 402,000 tons of the Nigerian market in 1981, and 54 percent (358,000 tons) in 1982. The U.S. share dropped to only 17 percent (124,000 tons) in 1983 and is projected to be 13 percent in 1984. Likewise, Thai exports grew from 198,000 tons in 1981 to 488,000 tons in 1983, and includes a 510,000 tons commitment so far in 1984. In the Nigerian market, price is a significant factor, with the Thai f.o.b. price about \$170 below the U.S. price, as well as the Nigerian preference for government-to-government contracts.

The Ivory Coast is another example of successful Thai marketing. In 1977, U.S. rice exports to the Ivory Coast,



**Table 25.—Supply and distribution of rice in Thailand**

Year	Beginning stocks	Pro- duction <sup>1</sup>	Imports	Exports	Domestic disappearance			Ending stocks
					Food	Feed	Total	
1,000 tons								
1970	1,697	8,851	—	1,064	7,478	485	7,963	1,521
1971	1,521	8,956	—	1,576	7,079	590	7,669	1,232
1972	1,232	9,071	—	2,112	6,503	510	7,013	1,178
1973	1,178	8,192	—	849	7,422	380	7,802	719
1974	719	9,834	—	1,046	7,573	655	8,228	1,279
1975	1,279	8,835	—	933	6,905	520	7,425	1,756
1976	1,756	10,098	—	1,870	7,586	680	8,266	1,718
1977	1,718	9,944	—	2,915	6,946	670	7,616	1,131
1978	1,131	9,188	—	1,573	7,103	415	7,518	1,228
1979	1,228	11,530	—	2,696	7,591	790	8,381	1,681
1980	1,681	10,400	—	2,700	7,690	560	8,250	1,131
1981	1,131	11,463	—	3,049	7,820	580	8,400	1,145
1982	1,145	11,732	—	3,620	7,307	600	7,907	1,350
1983 prel.	1,350	11,187	—	3,700	7,550	450	8,000	789
1984 est.	789	11,880	—	3,700	7,600	500	8,100	869

<sup>1</sup> Production allocated as follows: 1970 crop includes main crop harvested during November 1969-February 1970 and second crop harvested during June-August 1970.

Sources: Ministry of Agriculture and Cooperatives, Thailand; USDA estimates.

**Table 26.—Rice Exports by Thailand by major destination**

Country	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
<i>1,000 tons</i>														
Hong Kong	193	210	246	94	114	121	125	110	94	103	128	115	115	147
India	33	76	110	—	—	141	—	—	—	—	—	52	—	222
Indonesia	140	107	165	267	127	13	526	848	164	615	645	200	181	334
Iran	—	—	—	—	—	—	—	—	—	—	—	350	319	389
Iraq	—	18	10	—	81	—	43	76	74	97	53	—	—	—
Italy	—	1	4	—	—	1	—	3	2	26	43	27	32	54
Ivory Coast	—	—	59	—	—	—	—	13	—	—	—	157	136	87
Madagascar	—	10	19	5	14	12	49	—	—	—	—	21	269	124
Malaysia	118	105	103	29	74	19	119	203	157	101	154	237	388	307
Netherlands	6	18	38	29	8	8	7	8	8	9	71	31	24	46
Nigeria	—	—	—	—	—	—	46	278	483	198	197	198	186	488
PRC	—	—	—	—	—	30	114	—	—	71	18	211	320	47
Saudi Arabia	103	90	27	48	70	49	102	24	42	42	104	140	99	71
Senegal	—	149	200	78	20	28	111	67	61	229	327	226	309	271
Singapore	137	202	328	79	89	102	176	218	140	193	180	158	174	186
Syria	—	—	—	—	—	—	—	—	—	25	11	55	70	45
U.S.S.R.	—	—	—	—	20	11	—	—	—	61	204	277	40	—
Average export unit value (f.o.b.)														
Baht/ton	2,366	1,846	2,101	4,235	9,500	6,152	4,359	4,543	6,488	5,575	6,968	8,697	5,949	5,760
Exchange rate Baht/\$	20.93	20.93	20.93	20.38	20.38	20.4	20.4	20.4	20.39	20.42	20.63	23.0	23.0	23.0
Average Export unit value (f.o.b.)														
\$/ton	113	88	100	208	466	302	214	223	318	273	338	378	259	250

Sources: Department of Customs, Thailand; Bank of Thailand.

began climbing but have dropped off recently (to about 29,000 tons), while Thai exports moved from zero in 1980 to average 127,000 tons between 1981 and 1983. Iranian and Syrian markets have also turned to Thai rice supplies; yet, non economic reasons are as important as price. Iraq is predominantly a U.S. rice market, but has historically been a strong buyer of Thai rice. The extension of U.S. credit to Iraq has helped the United States maintain this market.

The EEC is a growing Thai market place, with rice exports rising from 16,300 tons in 1970 to 129,700 tons in 1983 (a record 252,000 tons were shipped in 1982). Still, the United States dominates the EEC rice markets, shipping 189,000 tons in 1970, and 387,000 tons in 1983. Price differences are indicated in table 27, and although the comparison is between U.S. and Thai high-quality rice, lower grades have similar price margins.

### **Good Output Supports Strong Exports**

The outlook for Thai exports in 1984 is for a record 3.8 million tons (up from 3.7 million tons in 1983) following fast-paced selling during the first 4 months. A recent policy initiative approved in January eliminates the RTG's traditional buying agencies, and instead provides loans to exporters, rather than middleman traders. This means exporters can buy directly from the farmer and

hopefully link the export and farmgate prices more closely. And a minimum stock policy and stricter export licensing represent attempts to more closely equate licenses with actual performance—a problem in the past. The outlook for the 1984/85 harvest is slightly below the 1983/84 crop that benefited from unusually good rains accompanying the 1983 monsoon season. However, exportable supplies in 1985 may be near 3.6 million tons. With continued large supplies, price competition is likely to be keen. [Leslie E. Ross, (202) 447-8230]

**Table 27.—Thai and U.S. rice prices<sup>1</sup>**

	Rotterdam C&F		Unit value f.o.b.	
	U.S.	Thailand	U.S.	Thailand <sup>2</sup>
	\$/ton		\$/ton	
1977	436	340	374	286
1978	530	439	454	383
1979	531	402	446	349
1980	599	513	503	444
1981	631	572	565	492
1982	481	326	416	305
1983	514	340	428	286

<sup>1</sup>Comparison of Thai 100-percent, Grade B and U.S. No.2-4 percent (Houston, Tx). <sup>2</sup>Includes export premium, export tax and cost of bagging.

Source: U.S. Department of Agriculture.

# **WORLD AGRICULTURE**

For concise quarterly reviews and forecasts of what's happening in the world, take a look at **World Agriculture Outlook and Situation**. It tells you about economic conditions, exchange rates, U.S. crop exports, and agriculture in regions around the globe. It provides data on major importers and exporters of wheat, rice, coarse grains, soybeans, and cotton, and often includes special articles on pertinent topics.

Annual subscription: \$9.00 (\$11.25 foreign).      Single copies: \$3.75 (\$4.70 foreign).

Send check or money order, payable to Superintendent of Documents, to:

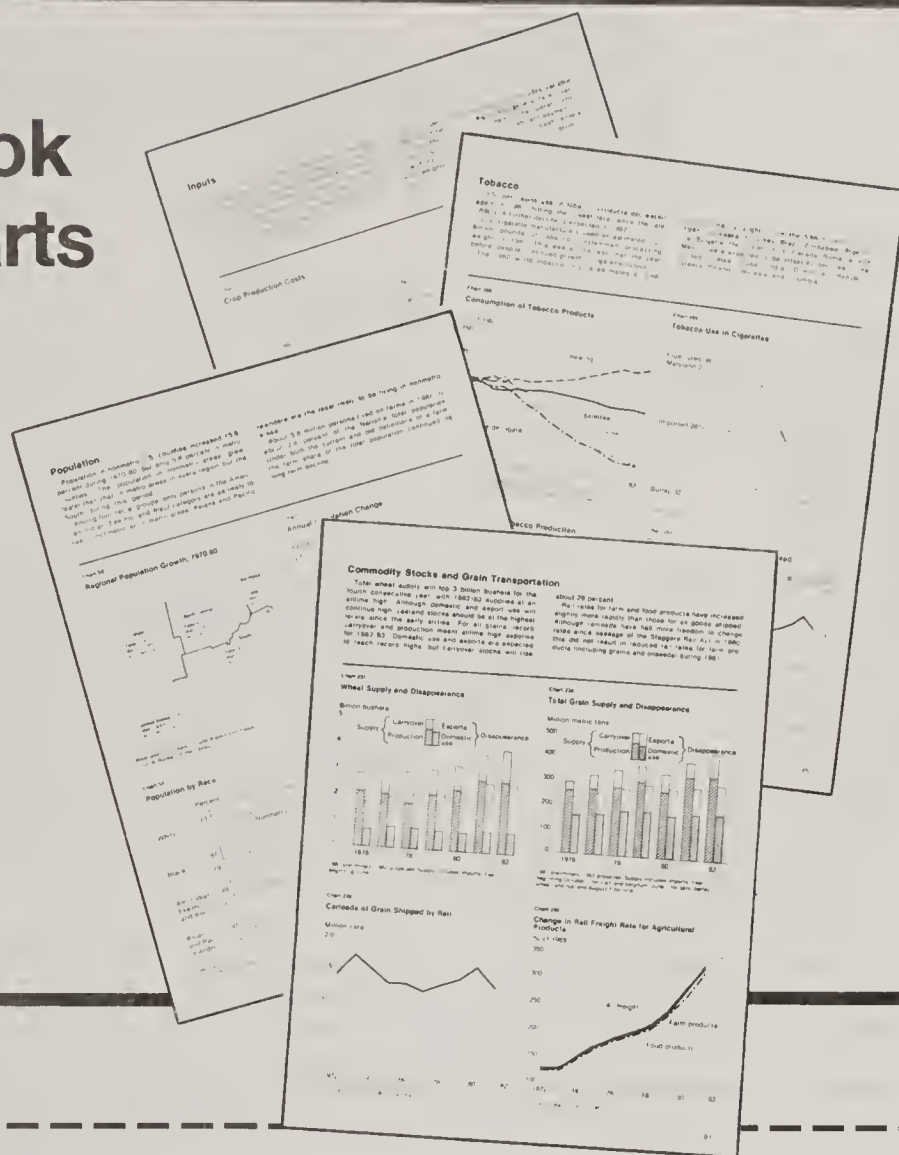
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

or call (202)783-3238 and charge your order to VISA or Mastercard.



# The 1983 Handbook of Agricultural Charts

Economic and agricultural trends come alive in this two-color handbook, containing 278 charts depicting all significant aspects of agriculture. A valuable research tool, popular teaching device, and convenient format for presenting a complete overview of the agricultural sector. The charts illustrate data and trends for agricultural subjects ranging from farm income to consumer costs, and from commodities to energy production and use. Charts showing trade data, cost of production figures, farmland numbers, and population trends round out the agricultural picture presented in this handbook. A USDA "bestseller." Copies will be available from the U.S. Government Printing Office beginning in December 1983. For your copy, use the GPO order form.



Write check payable to  
Superintendent of Documents  
Add 25% for foreign address.

MAIL ORDER FORM TO:  
Superintendent of Documents  
Government Printing Office  
Washington, DC 20402

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Please send me a copy of:

☐ **1983 Handbook of Agricultural Charts.**  
AH-619. Nov. 1983. 100 pp.  
Order SN: 001-000-04377-3  
from GPO. \$5.00.

For Office Use Only

Quantity \_\_\_\_\_ Charges \_\_\_\_\_  
\_\_\_\_ Enclosed \_\_\_\_\_  
\_\_\_\_ To be mailed \_\_\_\_\_  
\_\_\_\_ Subscriptions \_\_\_\_\_  
Postage \_\_\_\_\_  
Foreign handling \_\_\_\_\_  
MMOB \_\_\_\_\_  
OPNR \_\_\_\_\_  
\_\_\_\_ UPNS \_\_\_\_\_  
\_\_\_\_ DISCOUNT \_\_\_\_\_  
\_\_\_\_ Refund \_\_\_\_\_

Enclosed is \$ \_\_\_\_\_  
☐ Check  
☐ Money order  
☐ Charge to my Deposit Account  
No. \_\_\_\_\_

Credit Card Order Only

☐ VISA ☐ Mastercard  
Total charges \$ \_\_\_\_\_  
Credit card No. \_\_\_\_\_  
Expiration Date Month/Year \_\_\_\_\_



# Reports of the Economic Research Service

## U.S. Department of Agriculture

	Subscription Fee			Subscription Fee	
	Domestic	Foreign		Domestic	Foreign
<b>Outlook &amp; Situation Reports</b>					
<input type="checkbox"/> Agricultural Exports (4 issues)	\$7.00	\$8.75	<b>Other Reports</b>		
<input type="checkbox"/> Cotton & Wool (4)	8.00	10.00	<input type="checkbox"/> Agricultural Economics Research (4)	\$8.50	\$10.65
<input type="checkbox"/> Dairy (4)	8.00	10.00	<input type="checkbox"/> Agricultural Outlook (11)	31.00	38.75
<input type="checkbox"/> Feed (4)	8.50	10.65	<input type="checkbox"/> Economic Indicators of the		
<input type="checkbox"/> Fruit (4)	8.00	10.00	Farm Sector (5)	15.00	18.75
<input type="checkbox"/> Inputs (4)	8.50	10.65	<input type="checkbox"/> Farmline (11)	16.00	20.00
<input type="checkbox"/> Livestock & Poultry (6)	15.00	18.75	<input type="checkbox"/> Foreign Agricultural Trade		
<input type="checkbox"/> Oil Crops (4)	8.00	10.00	of the U.S. (8)	19.00	23.75
<input type="checkbox"/> Rice (2)	5.00	6.25	(6 issues plus 2 supplements.)		
<input type="checkbox"/> Sugar & Sweetener (4)	8.00	10.00	<input type="checkbox"/> Handbook of Agricultural	5.00	6.25
<input type="checkbox"/> Tobacco (4)	8.00	10.00	Charts (1)		
<input type="checkbox"/> Vegetable (4)	8.00	10.00	<input type="checkbox"/> National Food Review (4)	8.50	10.65
<input type="checkbox"/> Wheat (4)	8.00	10.00			
<input type="checkbox"/> World Agriculture (4)	9.00	11.25			
<input type="checkbox"/> World Agriculture Regionals (11)	18.00	22.50			
North America/Oceania, Latin America, Eastern Europe, Western					
Europe, USSR, Middle East and North Africa, Sub-Saharan Africa,					
East Asia, China, South Asia, Southeast Asia					

For single copy prices, call (202) 783-3238

Note: **ERS Abstracts**, issued periodically, provides descriptive information of current research reports and other publications and their purchase prices. To be placed on the free mailing list for **ERS Abstracts**, and for additional details about ordering publications, please contact: Information Division, Room 4309-S, USDA, Washington, D.C. 20250. (202) 447-7305 and 447-8590.

### HOW TO ORDER

- \*Check appropriate box.
- \*Calculate the total charges for subscriptions and enter below.
- \*If your address is outside the United States, use "foreign" price.
- \*Make check or money order payable to the Superintendent of Documents.

- \*Allow 6 weeks for processing.
- \*For faster service or foreign air mail information, call (202) 783-3238.
- \*Mail this entire form to: Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20402

Enclosed is \$ \_\_\_\_\_ ☐ check,  
☐ money order, or charge to my  
Deposit Account No.

\_\_\_\_\_-\_\_\_\_

Order No. \_\_\_\_\_

**MasterCard and  
VISA accepted.**



#### Credit Card Orders Only

Total charges \$ \_\_\_\_\_

Fill in the boxes below

Credit Card No. \_\_\_\_\_

Expiration Date  
Month/Year \_\_\_\_\_

Customer's Telephone No.'s			
Area Code	Home	Area Code	Office

Charge orders may be telephoned to the GPO order desk at (202)783-3238 from 8:00 a.m. to 4:00 p.m. eastern time, Monday-Friday (except holidays)

#### For Office Use Only

Quantity	Charges
_____	Publications
_____	Subscriptions
_____	Special Shipping Charges
_____	International Handling
_____	Special Charges
_____	OPNR
_____	UPNS
_____	Balance Due
_____	Discount
_____	Refund

Company or Personal Name

\_\_\_\_\_

Additional address/attention line

\_\_\_\_\_

Street address

\_\_\_\_\_

City

\_\_\_\_\_

State

ZIP Code

(or Country)

\_\_\_\_\_

PLEASE PRINT OR TYPE



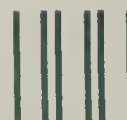
Southeast Asia and Vicinity



UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

**Moving?** To change your address send this sheet with label intact, showing new address, to EMS Information, Rm.400-GHI, USDA, Washington, D.C. 20250.



Postage and Fees Paid  
United States  
Department of Agriculture  
AGR-101

**BULK THIRD CLASS**

## ELECTRONIC INFORMATION

Economic Outlook and Situation report summaries are available to subscribers of electronic mail systems and data systems.

The summaries highlight the latest USDA supply/demand and price forecasts for U.S. and world crops and livestock, and prospects for exports and the agricultural economy.

The summaries are on line by 3:30 p.m., Washington, D.C. time, on the dates listed (release dates are subject to change). Full reports are on the electronic mail systems in a few days.

For information on providers of this service, call (202) 382-9759, or write EMS Information, USDA, Room 440 GHI, Washington, D.C. 20250.

### June

- 6 Sugar & Sweeteners
- 7 Tobacco
- 12 World Supply & Demand
- 20 Dairy
- 22 World Supply & Demand

### July

- 3 Agricultural Outlook
- 5 Livestock & Poultry
- 11 World Supply & Demand
- 13 Fruit
- 17 Farm Real Estate
- 24 Wheat
- 25 Inputs
- 26 Oil Crops
- 30 Vegetables

### August

- 1 Livestock & Poultry
- 2 Agricultural Outlook
- 13 World Supply & Demand
- 16 Feed
- 20 Exports
- 27 Cotton & Wool
- 28 World Agriculture

### September

- 4 Agricultural Outlook
- 10 Sugar & Sweeteners
- 13 World Supply & Demand
- 17 Fruit
- 18 Tobacco
- 19 Dairy
- 20 Rice
- 25 Inputs
- 28 Livestock & Poultry